POWERMATIC®

Operating Instructions and Parts Manual
18-inch Band Saw
Model PM1800



WALTER MEIER (Manufacturing) Inc.

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Part No. M-1791800
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Warranty and Service

Walter Meier (Manufacturing) Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these Walter Meier Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your POWERMATIC® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

MORE INFORMATION

Walter Meier is consistently adding new products to the line. For complete, up-to-date product information, check with your local Walter Meier distributor, or visit powermatic.com.

WARRANTY

POWERMATIC products carry a limited warranty which varies in duration based upon the product.

1 YEAR WARRANTY — Industrial Products		5 YEAR WARRANTY — Non-Industrial Products	
Horizontal Panel Saws	Belt Sanders	Tablesaws	Disc Sanders
Cut Off Saws	Shapers	Vertical Panel Saws	Edge Sanders
Rip Saws	Power Feeders	Bandsaws	Drum Sanders
Bandsaws	Mortisers	Jointers	Shapers
Jointers	Dovetailers	Planers	Drill Press's
Planers		Planer/Molder	Mortisers
Oscillating Edge Sanders		Dust Collection	Dovetailers

Warranty reverts to 1 Year if above products are used for commercial, industrial or educational purposes

WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

WHAT IS THE PERIOD OF COVERAGE?

The general POWERMATIC warranty lasts for the time period specified in the product literature of each product.

WHAT IS NOT COVERED?

The Five Year Warranty does not cover products used for commercial, industrial or educational purposes. Products with a Five Year Warranty that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option.

We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the handling and shipping costs of the return.

HOW STATE LAW APPLIES

This warranty gives you specific legal rights; you may also have other rights which vary from state to state.

LIMITATIONS ON THIS WARRANTY

WALTER MEIER (MANUFACTURING) INC., LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG THE IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

WALTER MEIER (MANUFACTURING) INC., SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Walter Meier sells through distributors only. The specifications in Walter Meier catalogs are given as general information and are not binding. Members of Walter Meier reserve the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

Table of Contents

⚠ Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This band saw is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a band saw, do not use until proper training and knowledge have been obtained.
5. Do not use this band saw for other than its intended use. If used for other purposes, Walter Meier (Manufacturing) Inc., disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this band saw. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this band saw, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Secure all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves when operating the machine.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
    - Lead from lead based paint.
    - Crystalline silica from bricks, cement and other masonry products.
    - Arsenic and chromium from chemically treated lumber.

    Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
11. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
12. Make certain the machine is properly grounded.
13. Make all machine adjustments or maintenance with the machine unplugged from the power source.
14. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
15. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after maintenance is complete.
16. Make sure the band saw is firmly secured to the floor or bench before use.
17. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
18. Provide for adequate space surrounding work area and non-glare, overhead lighting.
19. Keep the floor around the machine clean and free of scrap material, oil and grease.
20. Keep visitors a safe distance from the work area. **Keep children away.**

Warnings

21. Make your workshop child proof with padlocks, master switches or by removing starter keys.
22. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
23. Maintain a balanced stance at all times so that you do not fall or lean against the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
24. Adjust the upper guides to approximately 3/16" above the workpiece.
25. Make relief cuts when sawing curves.
26. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and more safely.
27. Use recommended accessories; improper accessories may be hazardous.
28. Maintain tools with care. Keep blades sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
29. Turn off the machine and disconnect from power before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
30. Do not stand on the machine. Serious injury could occur if the machine tips over.
31. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
32. Remove loose items and unnecessary work pieces from the area before starting the machine.

Familiarize yourself with the following safety notices used in this manual:

CAUTION This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

WARNING This means that if precautions are not heeded, it may result in serious injury or possibly even death.

- - SAVE THESE INSTRUCTIONS - -

Introduction

This manual is provided by Walter Meier (Manufacturing) Inc., covering the safe operation and maintenance procedures for a Powermatic Model PM1800 Band Saw. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide years of trouble free operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or Walter Meier. Walter Meier can also be reached at our web site: www.waltermeier.com.

Specifications

Model Number.. **PM1800**
Stock Number (5HP 1PH) 1791800
Stock Number (5HP 3PH) 1791801
Motor (1PH) .... TEFC, 5HP, 1PH, 230V, 60Hz, 21A
Motor (3PH) ....TEFC, 5HP, 3PH, 230/460V (pre-wired 230V)*, 60Hz
Blade Speeds (SFPM) .... 1800 and 4200
Maximum Cutting Height/Resaw Capacity (in.) 18
Throat Capacity (in.) 18
Minimum Blade Width (in.) 1/16
Maximum Blade Width (in.)..1-1/2
Blade Length (in.) ....160 to 161-1/2
Blade provided (in.)..Hook Type, 3/4 W x 0.03 Thk, 4TPI
Resaw Fence (L x H)(in.)..30 x 6-1/2
Resaw Pin (Dia. x H)(in.)..2 x 6-1/2
Table Dimensions (L x W x Thk)(in.) .... 24 x 24 x 2
Table Thickness (in.)..2
Table Tilt (deg.) ....45 right, 15 left
Table Height from Floor @ 90 deg. (in.)..37-1/2
Miter Gauge Positive Stops (deg.)..45 and 90
Wheel Diameter (in.) 18-1/2
Power Transfer...poly-V belt drive
Switch...magnetic, with power indicator lamp
Dust Port Diameter (in.)..4
Dust Collection CFM Required 400
Overall Dimensions (L x W x H)(in.) ....38 x 42 x 81-1/2
Net Weight (lbs.)..806
Shipping Weight (lbs.)..902

**NOTE:* For 460V operation, magnetic switch (part no. PM2000-293C) must be purchased separately and installed. A qualified electrician is recommended.*

The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, Walter Meier reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Features and Terminology

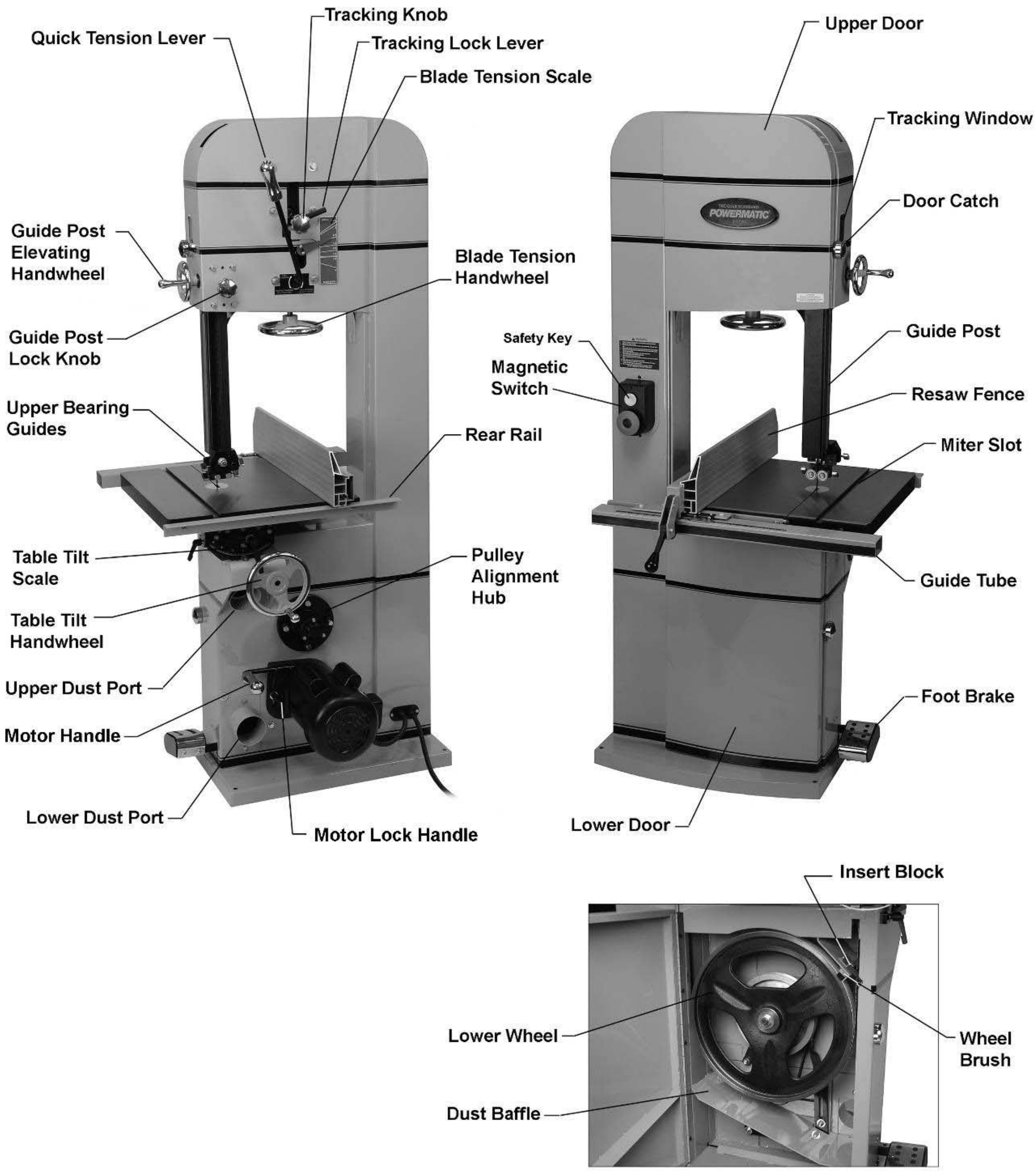


Figure 1

Unpacking

Open shipping container and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Band Saw is assembled and running properly.

Compare the contents of your container with the following parts list and photos to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

Contents of the Shipping Container

1 Band Saw (not shown)
1 Rip Fence Body
1 Extruded Aluminum Resaw Fence
1 Front Rail
1 Rear Rail
1 Guide Tube
1 Resaw Pin with Locking Knob
1 Hardware Package containing:
  10 Hex Cap Screws, 5/16”-18 x 3/4” (AA)
  10 Lock Washers, 5/16” (BB)
  10 Flat Washers, 5/16” (CC)
1 Miter Gauge
1 Owner's Manual (not shown)
1 Warranty Card (not shown)

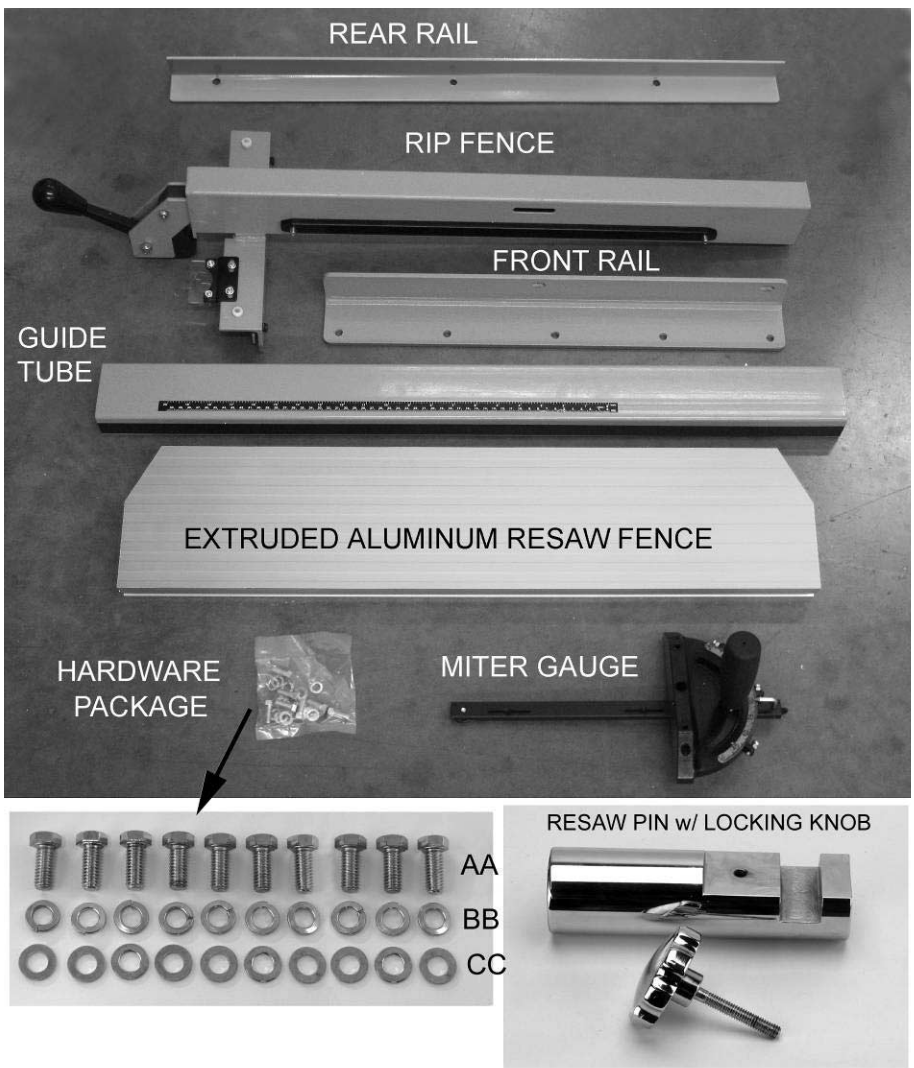


Figure 2

WARNING **Read and understand the entire contents of this manual before attempting set-up or operation! Failure to comply may cause serious injury.**

Installation

Tools required for assembly and set up:

7/32" hex (Allen) wrench
6mm hex (Allen) wrench
12mm open-end wrench
Square
Hoist or forklift, with straps

Remove all crating and plastic from around the machine. Remove any screws or straps holding the band saw to the shipping pallet.

⚠CAUTION Exercise care when removing the machine from the shipping pallet.

Use a hoist or forklift with straps to remove the machine from the pallet. The straps used should have a minimum 1,000 lb. lifting capacity. Do NOT place forks or straps directly beneath the table or against handles or levers - place the straps under the top portion of the frame, as shown in Figure 3.

Move the band saw to its permanent location, which should be dry and well lit, with enough space on all sides to handle long stock or perform routine maintenance on the machine. Make sure the floor is able to support the weight of the machine. If desired, the band saw can be secured to the floor using lag screws (not provided) through the four holes in the base.

Exposed metal surfaces, such as the table surface and blade guides, have been given a protective coating at the factory. This coating should be removed with a soft cloth moistened with solvent. Do not get solvents near plastic or rubber parts; and do not use an abrasive pad as it may scratch the exposed surfaces.



Figure 3

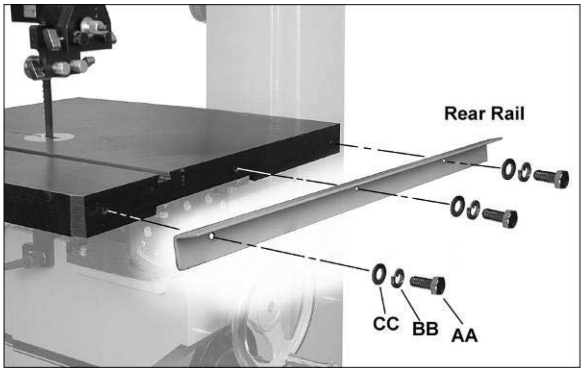


Figure 4

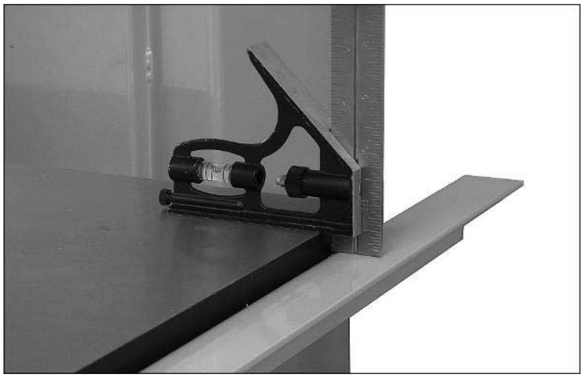


Figure 5

Assembly

Rear Rail

Refer to Figures 4 and 5.

1. Install the *rear rail* to the rear edge of the table, using three *5/16-18 x 3/4 hex cap screws (AA)*, three *5/16 lock washers (BB)*, and three *5/16 flat washers (CC)* as shown. Hand tighten only.
2. The exact distance from *rear rail* to table top is not important, but the *rear rail* should be made parallel to the table top. Place a measuring device, such as a combination square (Figure 5) at front and back of the table as shown.

The measurement should be the same at both ends of the *rear rail*. Adjust as needed.

3. Tighten the two screws with a 12mm wrench.

Front Rail and Guide Tube

Refer to Figure 6.

4. Install the *front rail* to the front edge of the table, using two *5/16-18 x 3/4 hex cap screws (AA)*, two *5/16 lock washers (BB)*, and two *5/16 flat washers (CC)*, through the slotted holes in the rail. Place the screws approximately center of the slots; this can be adjusted later as needed. Tighten the two screws with a 12mm wrench.
5. Install the *guide tube* to the bottom holes in the front rail, using five *5/16-18 x 3/4 hex cap screws (AA)*, five *5/16 lock washers (BB)*, and five *5/16 flat washers (CC)*. Tighten all five screws in the guide tube with a 12mm wrench. Do not overtighten.

Fence Assembly

Refer to Figures 7 and 8.

Place the fence body onto the guide tube (as shown in Figure 8). Raise the fence lever all the way up to install or remove the fence from the guide tube. Midway lever position allows the fence to slide along the guide tube. Lowest lever position locks the fence in place.

Resaw Fence

Refer to Figures 8 and 9.

Loosen the *lock bar* using the *knobs*, until the lock bar protrudes enough to slide the aluminum *resaw fence* on from one end, as shown in Figure 8. Re-tighten the knobs.

NOTE: The aluminum resaw fence can be installed in one of two positions; vertically (resaw position), as shown in Figure 8; or horizontally as shown in Figure 9. Horizontal position is useful for smaller workpieces. (The zero setting of the cursor can not be used with the horizontal fence position.)

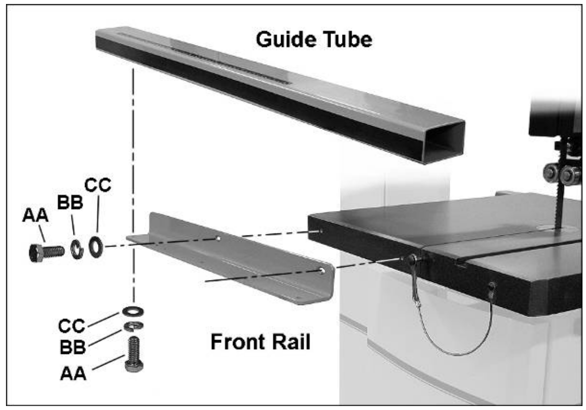


Figure 6

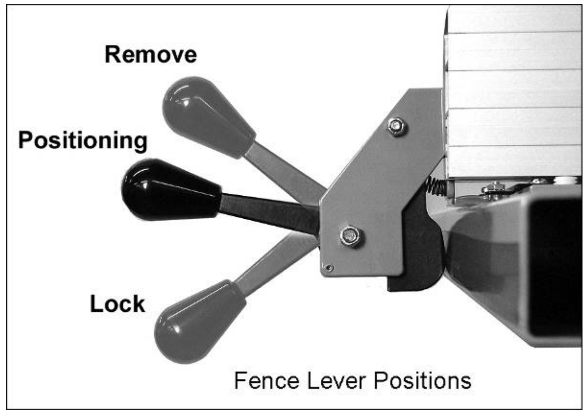


Figure 7

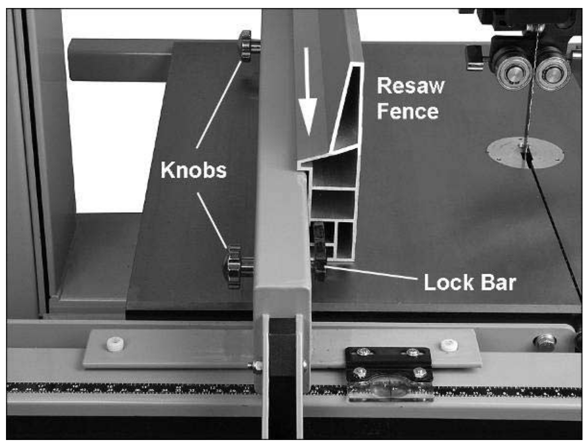


Figure 8 (resaw fence vertical position)

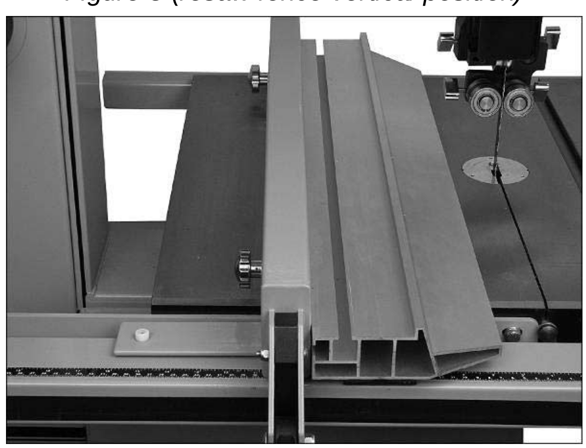


Figure 9 (horizontal fence position)

Fence to Table Clearance

1. Check the clearance between the table and the bottom of the fence (Figure 10). The fence should not rub against the table surface but be slightly above it. This gap should be the same at the front of the table as it is at the back.
2. If the clearance is not the same, use a combination of the following two adjustments:

   • With a 7/32" hex wrench, rotate the two nylon adjustment screws (A, Figure 16) the *same amount* to raise or lower the fence body from the guide tube. Clockwise raises the fence body, counterclockwise lowers.

   • And/or....Adjust the back end of the fence by loosening one hex nut and tightening the other (A, Figure 11) in order to raise or lower the sliding pad (B, Figure 11) as needed. When the fence-to-table gap is equal, make sure both hex nuts are tightened against the fence body.

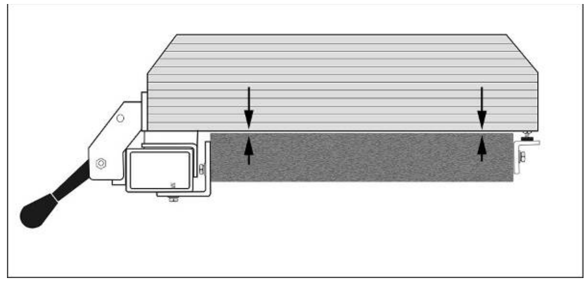


Figure 10

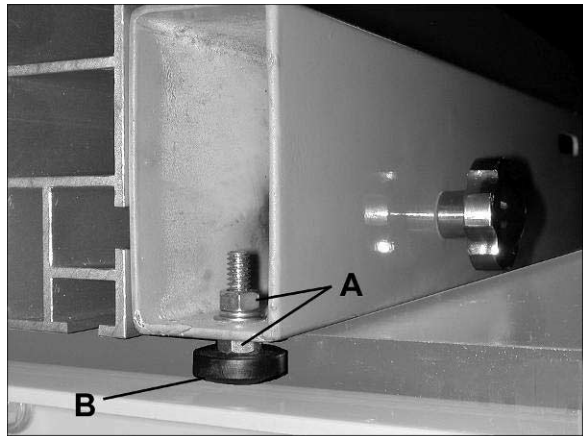


Figure 11

Setting Cursor (Zero) Position

Refer to Figure 12.

The fence must be set so that the cursor reads zero at the line of the blade. The resaw fence must be installed on the fence body in vertical position, and the blade must be installed and fully tensioned.

1. Slide the fence flush against the flat of the blade, as shown. (Do not force the fence into the blade so that the blade bends.)
2. If the cursor is not at zero, loosen the two screws and slide it as needed. Then re-tighten the screws.

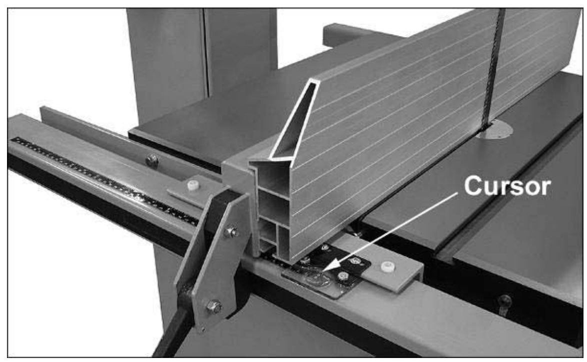


Figure 12

Setting Table Parallel to Blade

Refer to Figures 13 and 14.

The table has been aligned by the manufacturer so that the miter slot is parallel to the flat of the blade; it should not require adjustment. However, in the future you may wish to confirm this setting is still accurate. A wide blade is recommended for the procedure.

1. Disconnect band saw from power source.
2. The blade should be fully tensioned and properly tracked (see pages 17 and 18).
3. Place a long straightedge flush against the blade making sure it contacts both front and back of the blade. (Do not deflect the blade by pushing into it.) See Figure 13.

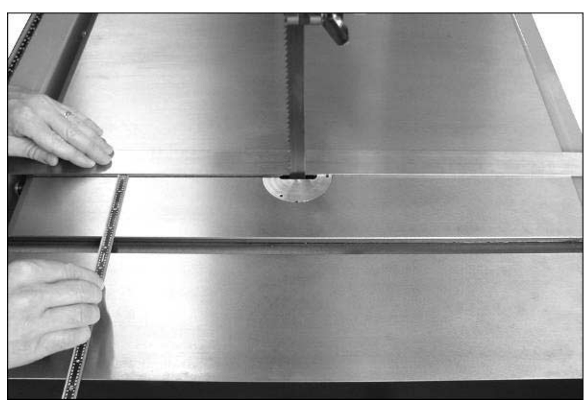


Figure 13

4. Use a gauge to carefully measure the distance from miter slot to straight edge. Take measurements at both front and back of table – these should be the same.
5. If the miter slot is not parallel to the blade, loosen the four *hex cap screws* that secure the table to the trunnion (Figure 14 shows three of them), and shift the table as needed until the miter slot is parallel to the blade.
6. Tighten the four *hex cap screws*.

Setting Fence Parallel to Blade

Refer to Figures 15 and 16.

The fence should be parallel to the flat of the blade for accurate cutting. Since the miter slot has been set parallel to the blade from the manufacturer (and confirmed by the user, as described above), you can use the table miter slot to set the fence parallelism.

1. Remove the aluminum resaw fence and the mounting bar from the fence body, and slide the fence body to the edge of the miter slot, as shown in Figure 15. The fence should align with the miter slot along the entire length of the fence.
2. If adjustment is needed, use one of the *back adjustment screws* (B, Figure 16) to turn the fence in line with the miter slot.

The fence must also be parallel to the blade vertically. *Refer to Figure 17.*

3. Make sure the table has been set 90° to the blade (see “90° Table Stop”).
4. Mount the resaw fence, and slide the fence up against the blade; do not push into the blade. Turn either of the nylon adjustment screws until fence is parallel to blade along the vertical length of fence.

Fence Locking Tightness

The tightness of the fence against the guide tube can be adjusted by rotating the two back screws (B, Figure 16). Rotate the two screws *equally* (clockwise to tighten) with a 5mm hex wrench.

Because these screws are also used to align the fence to the blade, after adjusting fence locking tightness, you should double check fence-to-blade relationship, as explained under “Setting Fence Parallel to Blade.”

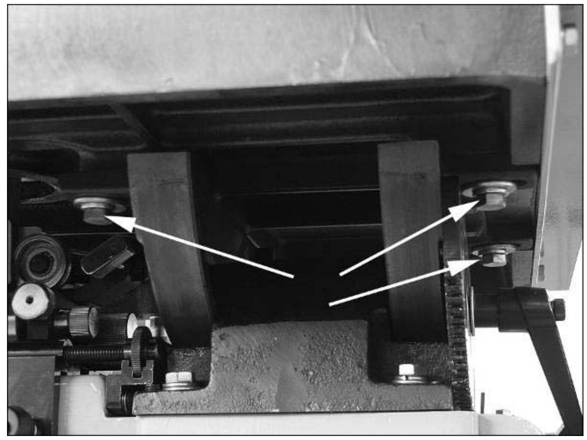


Figure 14

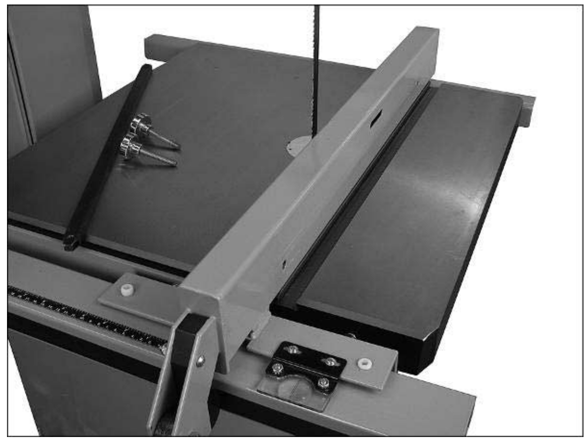


Figure 15

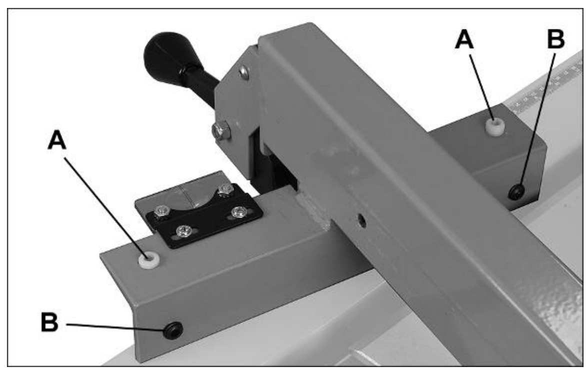


Figure 16

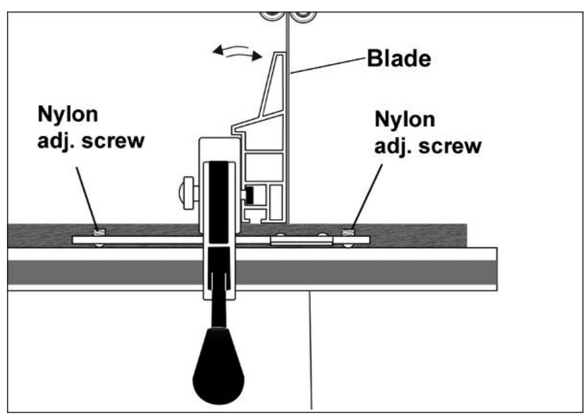


Figure 17

Dust Collection

The use of a dust collection system is strongly recommended for this band saw. It will help keep the shop clean, as well as reduce potential health hazards caused by inhalation of wood dust. The collector should have a capacity sufficient for this size machine – 400 CFM is recommended. Walter Meier has a line of dust collection systems available; see your dealer or visit our website listed on the back cover.

Connect the hoses of your dust collection system to the 4” dust ports at the rear of the band saw. Secure tightly with hose clamps (not provided). See Figure 18.

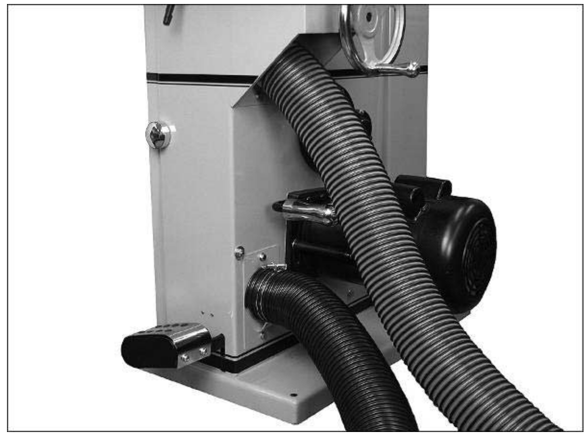


Figure 18

Electrical Connections

WARNING Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

Single Phase Connections

The single phase Band Saw is factory wired for 230 volts. It is not supplied with a plug. You may either install a UL/CSA-listed plug suitable for 230 volt operation, or “hard-wire” the Band Saw directly to a service panel.

It is recommended that the *single phase* Band Saw be connected to a grounded and dedicated, minimum 50 amp circuit with a 50 amp circuit breaker or time delay fuse. **Local codes take precedence over recommendations.**

Three Phase Connections

The three phase Band Saw is factory wired for 230 volts. It is not supplied with a plug. You may either install a UL/CSA-listed plug suitable for 230 volt operation, or “hard-wire” the Band Saw directly to a service panel.

The three phase Band Saw may be converted to 460V operation. The current contactor must be replaced with the 460V magnetic contactor (part no. PM2000-293C, purchased separately). In addition, re-connect the motor leads according to the diagrams inside the motor junction box. (Similar diagrams may be found at the back of this manual.)

It is recommended that the *three phase* Band Saw be connected to a grounded and dedicated, minimum 30 amp circuit with a 30 amp circuit breaker or time delay fuse. **Local codes take precedence over recommendations.**

If the single phase or three phase Band Saw is to be “hard-wired” to a service panel, make sure a disconnect is available for the operator. During hard-wiring of the machine, make sure the fuses have been removed or the breakers have been tripped in the circuit to which the Band Saw will be connected. Place a warning placard on the fuse holder or circuit breaker to prevent it being turned on while the machine is being wired.

Grounding Instructions

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor.

If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Repair or replace a damaged or worn cord immediately.

Make sure the voltage of your power supply matches the specifications on the motor plate of the Band Saw.

Extension Cords

The use of extension cords is discouraged; try to position the machine within reach of the power source. If an extension cord becomes necessary, make sure the cord rating is suitable for the amperage listed on the machine's motor plate. An undersize cord will cause a drop in line voltage resulting in loss of power and overheating.

Use the chart in Figure 19 as a general guide in choosing the correct size cord. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Recommended Gauges (AWG) of Extension Cords

	Extension Cord Length *					
Amps	25 feet	50 feet	75 feet	100 feet	150 feet	200 feet
< 5	16	16	16	14	12	12
5 to 8	16	16	14	12	10	NR
8 to 12	14	14	12	10	NR	NR
12 to 15	12	12	10	10	NR	NR
15 to 20	10	10	10	NR	NR	NR
21 to 30	10	NR	NR	NR	NR	NR

*based on limiting the line voltage drop to 5V at 150% of the rated amperes.
NR: Not Recommended.

Figure 19

Adjustments

Table Tilt

Refer to Figures 20 and 21.

1. Loosen the lock lever (A).
2. For **right tilt** (as viewed from front or operator's side of the saw), rotate the handwheel (B) counterclockwise to tilt table up to 45°.
3. For **left tilt** (as viewed from front or operator's side of the saw), loosen the lock lever (A) and rotate the handwheel clockwise a turn or two to release pressure on the 90° stop bolt (C). Rotate the circular plate (D) out of the way. Then rotate the handwheel clockwise to tilt the table to 15°.

   The now-exposed hole in the band saw body allows the stop bolt to descend through it, to keep intact the setting of the 90° stop.
4. Tighten the lock lever (A, Figure 20) to secure the setting.

NOTE: The circular plate (D) can be tightened or loosened as desired by using a 5/32" (4mm) hex wrench on the screw.

Also, the lever (A, Figure 20) can be pivoted to a more convenient position. Simply lift straight out on the lever and rotate it on the pin, then release the lever making sure it seats itself on the pin.

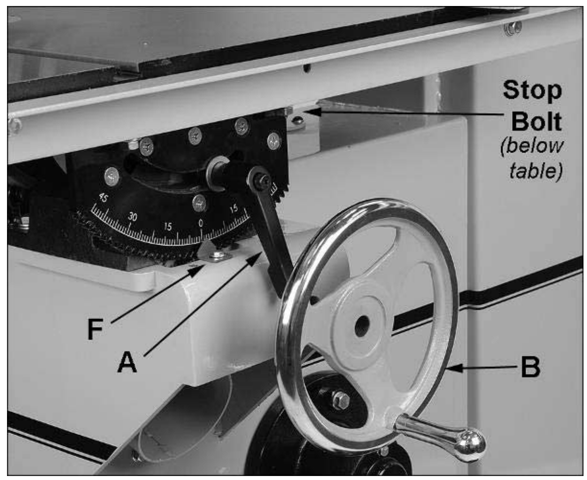


Figure 20

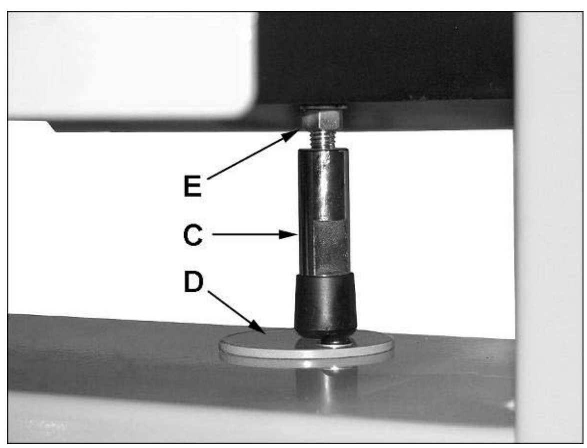


Figure 21

90° Table Stop

Refer to Figures 20 through 22.

The 90° positive stop ensures that the table will always be perpendicular to the blade after the table is returned to horizontal position. Check and adjust this 90° stop as follows:

1. Disconnect machine from power source.
2. Make sure blade is under full tension.

3. Loosen lever (A, Figure 20) and tilt table with the handwheel (B), until the stop bolt (C) rests on the circular plate (D).
4. Make sure the table insert is level with surface of table by rotating one or more of its set screws with a 5/164” (2mm) hex wrench. Then place a square on the table and against the blade to check that the table is 90° to the blade. See Figure 22. *NOTE: Do not push square into blade.*
5. If table and blade are not square, use a 9/16” (14mm) wrench to loosen the lock nut (E) then rotate the stop bolt. Turn the stop bolt as needed until there is no longer light showing between the square and the blade.
6. Tighten lock nut (E) to secure the table stop in position.
7. Tighten the lever (B).
8. Check that the scale pointer (F, Figure 20) is at zero. If necessary, loosen the screw on the pointer and shift the pointer to zero. Then re-tighten the screw.

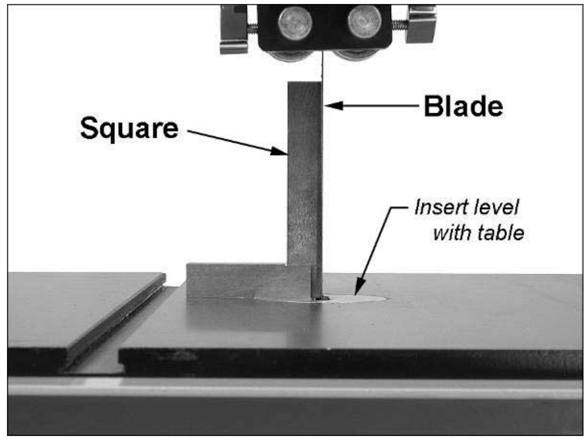


Figure 22

Installing/Changing Blades

⚠CAUTION Always wear gloves when handling blades. New blades are usually packaged in a coiled position; to prevent injury uncoil them slowly and carefully, while wearing work gloves and safety glasses.

The PM1800 Band Saw is designed for blades from 1/16” to 1-1/2” wide. The Band Saw is provided with a blade of the following specifications: 0.03” thick, 3/4” wide, 4 TPI.

Refer to Figures 23 and 24.

1. Disconnect machine from power source.
2. Remove the *table insert* (A, Figure 23).
3. Pull out *table pin* (B) at the end of the slot.
4. Adjust upper and lower blade guides away from the blade.
5. Move the quick tension lever to “Full Release (Blade Change)” position.
6. Open upper and lower doors by rotating the door catches. Open the lower blade guard and slide out the insert block (Figure 24).
7. Carefully remove the blade from the top wheel, then from between upper and lower blade guides and lower wheel. Slide the old blade out through the slot in the table.

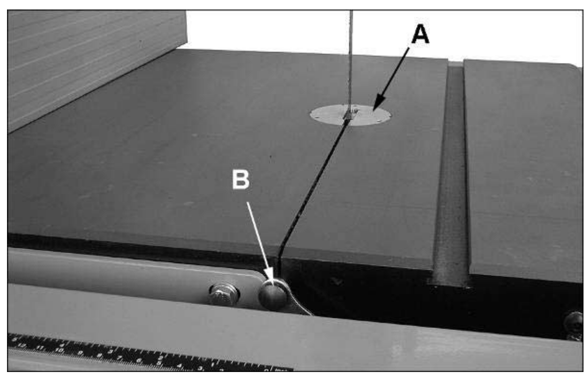


Figure 23

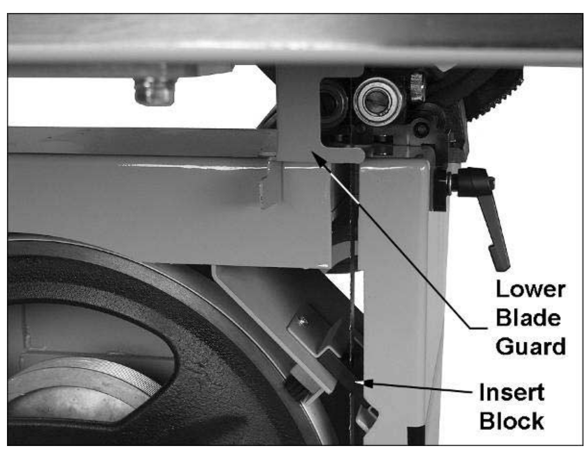


Figure 24

8. Guide new blade through table slot. Place blade loosely in the upper and lower blade guides. Make sure blade teeth point down toward table, and toward the front of the saw. (If the teeth will not point down, no matter how you orient the blade, then the blade is twisted inside-out. Twist it into correct position and re-install it.)
9. Position blade at the center of the upper and lower wheels.
10. Re-install table insert (A) and table pin (B).
11. Before operating the band saw, the new blade must be *tensioned* and *tracked*, in that order. Find instructions for tensioning and tracking the blade under "Blade Tension" and "Blade Tracking." The blade guides must also be set properly according to the instructions on pages 19 and 20.

Blade Tension

Refer to Figure 25.

1. Disconnect machine from power source.
2. Back off upper and lower guide bearings to eliminate any contact with the blade.
3. With the blade centered on the wheels, move the *quick tension lever* to "Full Tension" position, as shown in Figure 25. NOTE: You will be able to feel the lever fall into each position.
4. Rotate the tension handwheel (C) until the scale pointer (D) reaches the appropriate measurement for the width of the blade.

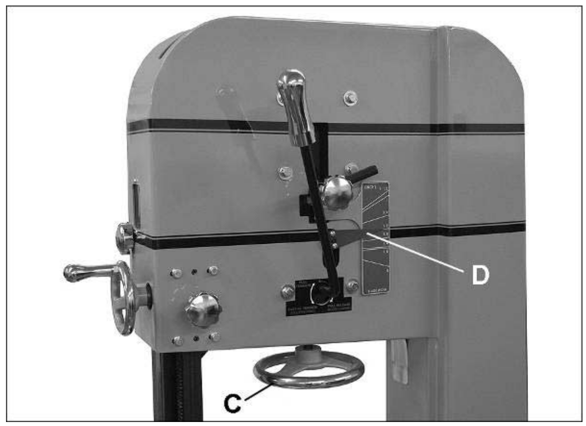


Figure 25

TIP: Use the band saw's gauge setting initially. As you become familiar with the machine and with the different properties of band saw blades, you may find it necessary to change the blade tension from the initial setting. Keep in mind that not only changes in blade width, but also the type of material being cut will have an effect on blade tension. Too little or too much blade tension can cause blade breakage and/or poor cutting performance.

Make a note of the specific tension setting for a particular blade. The tension can then be re-set quickly when band saw operations are resumed.

IMPORTANT: When the band saw is not being used, move the quick tension lever to "Partial Tension-Idle/Tracking" position. This will prolong the life of the blade and tires, and reduce load on wheels, bearings and other components.

Blade Tracking

Refer to Figure 26.

After being properly tensioned, the blade must be tracked. "Tracking" refers to the position of the blade on the wheels while the machine is in operation. Tracking should be checked periodically, and is mandatory after every blade change. Blade tracking is done by hand with the machine disconnected from power.

1. Disconnect machine from power source.
2. The blade should be correctly tensioned.
3. Make sure the blade guides and other parts of the machine will not interfere with the movement of the blade. Lower the guide post until you can see the blade through the tracking window.
4. Set the quick tension lever intially to "Partial Tension-Idle/Tracking" position, as shown in Figure 26.
5. Open upper door to expose the upper wheel. Rotate the wheel by hand, and observe the position of the blade on the wheel through the tracking window. As you rotate the wheel, move the lever to "Full Tension" position. The blade should continue to ride upon the center of the wheel (Figure 27).

IMPORTANT: Make tracking adjustments with knob (F, Figure 26) while the blade is at full tension. DO NOT use screws (G, Figure 26); these were used by the manufacturer for wheel alignment and should NOT be used for tracking.

6. If the blade tends to move toward the edge of the wheel, loosen locking lever (E, Figure 26) and slightly rotate tracking knob (F) with your right hand while continuing to rotate the wheel with your left. Observe the blade through the tracking window. Rotating the tracking knob clockwise will cause the blade to move toward the rear edge of the wheel. Rotating the tracking knob counterclockwise will cause the blade to move toward the front edge of the wheel.

   IMPORTANT: This adjustment is sensitive; perform it in small increments and give the blade time to react to the changes.

7. When the blade is tracking in the center of the wheel, re-tighten locking lever (E), and close upper door.
8. Move tension lever to "Full Tension" position, and connect the band saw to power. Turn it on for a brief time to observe the blade in action through the tracking window.

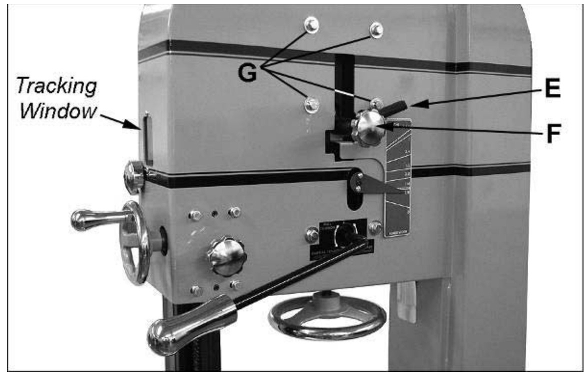


Figure 26

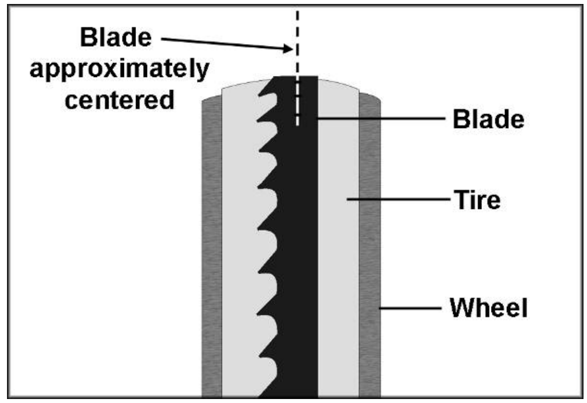


Figure 27

9. Make further adjustments as needed, with the saw disconnected from power.

Upper Blade Guides

The bearing guides should be set so that contact between blade and guides will occur only when the blade is under pressure from a workpiece. To adjust the upper bearing guides for proper blade control, proceed as follows.

Refer to Figures 28 through 31.

1. Disconnect machine from power source.
2. Blade must already be tensioned and tracking correctly. Place quick tension lever in “Full Tension” position.
3. Lower the guide post until the upper guide bearings are a few inches off the table. (The reason for this will be shown later under “Guide Post Parallelism.”)
4. Loosen the locking screw (A, Figure 28).
5. Move the entire guide bracket by rotating the knurled knob (B) until the front of the guide bearings are about 0.015” (1/64”) behind the blade’s gullet (curved area at the base of the tooth). See Figure 30.
6. Tighten the locking screw (A) to secure this position.
7. Loosen the locking screw (C) for one of the guide bearings.
8. The guide bearing rotates on an eccentric shaft. Adjust the guide bearing by rotating the knurled knob (D) until the guide bearing is approximately 0.004” from the blade. A quick way to achieve this spacing is by placing a single thickness of a crisp dollar bill (a dollar bill is approximately 0.004” thick) between blade and guide bearing. See Figure 31. Adjust the guide bearing until it just lightly grips the dollar bill.

   NOTE: Do not force the guide bearing against the side of the blade. It should only make contact with the blade when there is pressure from the cutting operation.
9. Tighten locking screw (C) and remove dollar bill.
10. Repeat process for opposite guide bearing.

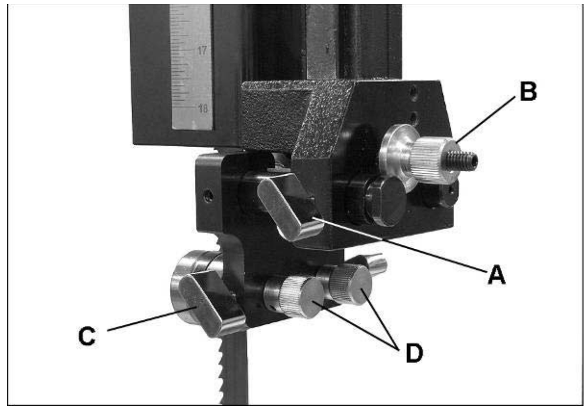


Figure 28

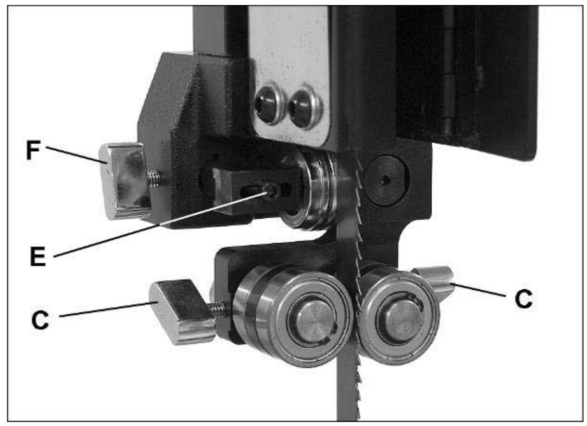


Figure 29

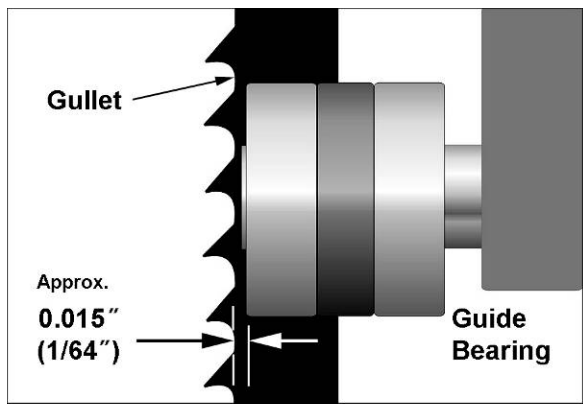


Figure 30



Figure 31

Upper Thrust Bearing

Refer to Figures 29 and 32:

The thrust bearing prevents backward deflection of the blade during cutting. The thrust bearing has three options for stabilizing the back of the blade (see Figure 32). The *v-shaped groove* is for small, thin blades, such as scrolling and contour-cutting blades. The *flat bottomed groove* supports thicker blades. And the *non-grooved* standard bearing surface at the left is for support of larger blades.

1. Loosen the socket head cap screw (E, Figure 29) and push the thrust bearing bracket laterally to desired position.
2. Re-tighten the socket head cap screw (E).
3. Loosen the locking screw (F) and push the thrust bearing up to the back of the blade.
4. Adjust the thrust bearing until the space between the thrust bearing surface (or groove bottom) and the back edge of the blade is approximately 0.015" (1/64"). On the non-grooved surface, a convenient way to achieve this spacing is by placing a dollar bill folded twice (four thicknesses of a dollar bill is approximately 1/64") between blade and thrust bearing. If using a groove, set this distance by eye.
5. Tighten locking screw (F).
6. Make sure all locking screws on the upper guide bearing assembly are tightened when adjustments are finished.

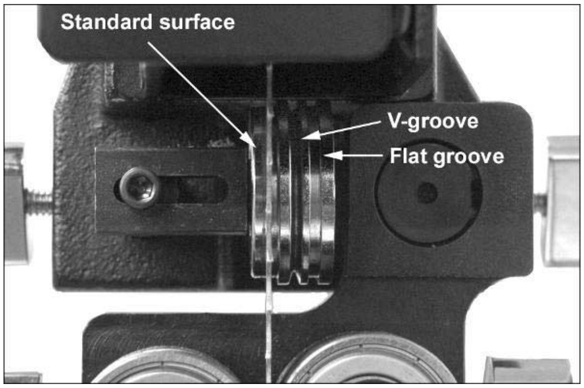


Figure 32

Lower Blade Guides

Refer to Figure 33.

1. Disconnect band saw from power source.
2. Open lower door and lower blade guard.
3. Adjust the lower guide bearings and lower thrust bearing below the table, using the same procedure and measurements as for the upper guide bearings and upper thrust bearing described above.

   Movement summary: Loosen locking lever (G) to move guide bracket using dial (H). Loosen knob (J) to rotate side bearings, using (K) and (L). Loosen locking screw (M) to slide thrust bearing toward blade.
4. Make sure all screws, knobs and lever are tightened when adjustments are complete.

NOTE: The locking lever (G, Figure 33) can be re-positioned if needed. Simply pull out on the lever, rotate it on the hub, and release it. Make sure it re-seats itself on the hub.

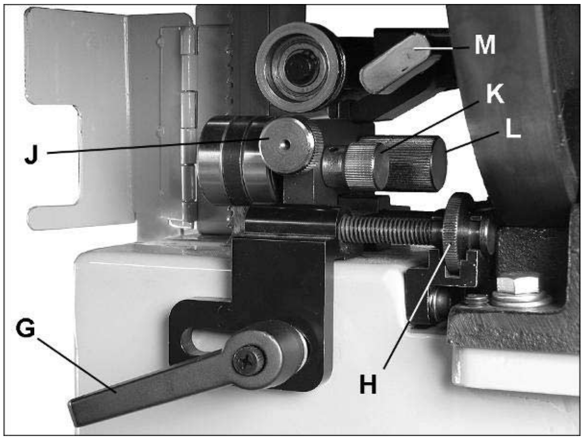


Figure 33

Guide Post

Refer to Figure 34.

1. Disconnect band saw from power source.
2. Loosen lock handle (A) and raise or lower guide post by rotating the handwheel (B).
3. Position the blade guide assembly so that the bottom of the guide bearings are about 3/16” above the material to be cut. Or, simply lower the guide post until the scale pointer (C) indicates the height of your workpiece. This provides minimal clearance between the workpiece and the bottom of the guide bearings, which will minimize blade deflection as well as enhance operator safety.
4. Tighten lock handle (A).

Guide Post Parallelism

The guide post should be parallel to the blade throughout the vertical travel of the guide post; thus the guide bearings will maintain their relationship to the blade at any height from the table and they won’t have to be re-set each time the guide post is moved. This setting has been accurately made by the manufacturer and should not require immediate attention, but it may be checked in the future as follows:

1. Disconnect band saw from power source.
2. Move blade tension lever to “Full Tension” position.
3. The guide bearings in low position should already be set in relation to the blade (see “Upper Blade Guides”). Also, the table should be square with the blade (See “90° Table Stop”).
4. Loosen the lock handle (A, Figure 34) and raise the guide post to a high position.
5. Confirm that the guide post travels straight up and down, and the guide bearings maintain their relationship to the blade.
6. If the guide post does not go straight up and down (the blade begins deflecting when the guide post is raised), slightly loosen the four hex cap screws (D, Figure 34).
7. Left and right adjustment is accomplished using a combination of the four hex cap screws (D); forward/back adjustment is accomplished using the two set screws (E).
8. When finished adjusting, securely tighten the four hex cap screws (D).
9. Re-check the setting by raising and lowering the guide post.

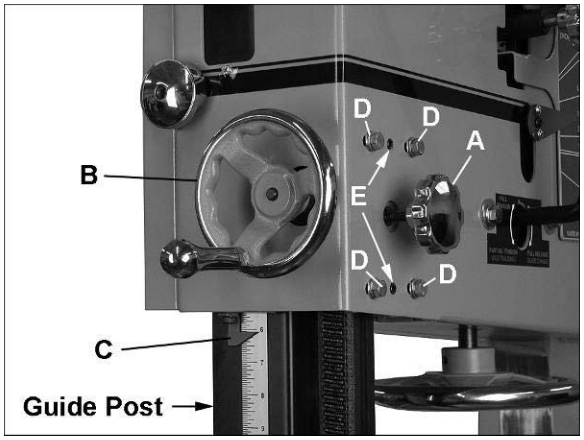


Figure 34

Resaw Pin

Refer to Figure 35.

A resaw pin is provided with the band saw. It provides a single contact point while ripping a workpiece into thinner boards.

Remove the aluminum resaw fence and mount the resaw pin to the slot in the fence body, securing it with the knob, as shown. The resaw pin is usually positioned so that its center is approximately even with the front edge of the blade.

See under "Operation" for further information on using the resaw pin.



Figure 35

Miter Gauge

Refer to Figures 36 and 37.

A miter gauge is provided for crosscutting operations. Install the miter gauge by sliding the end of the miter gauge bar into the table's T-slot.

The miter gauge should fit snugly within the miter slot while still sliding easily. The bar of the miter gauge has two slots, each with a set screw (Figure 36). Rotate one or both of these set screws with a 5/32" (4mm) hex wrench as needed to eliminate any play between the miter gauge bar and miter slot.

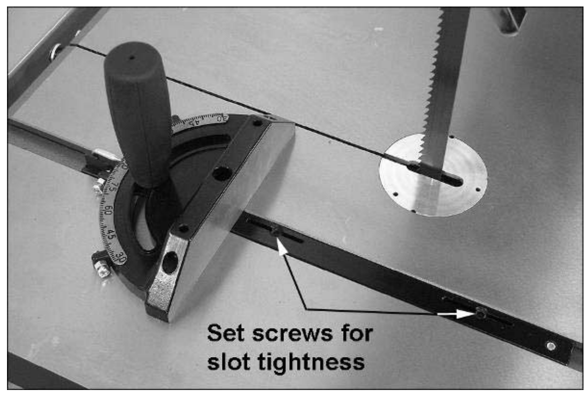


Figure 36

If the table/miter slot is square to the blade (see "Setting Table Parallel to Blade"), the miter gauge will also be square to the blade. Before operating, however, the 90° setting of the miter gauge should be checked in relation to the blade, as follows.

1. Place a square against the miter gauge face, and against the flat of the blade, as shown. (Place the square against the flat of the blade, not the teeth which are set wider than the blade body). A wide blade is preferred for this procedure.
2. Flip the 90° stop plate (C) out of the way, and loosen the handle (A). Shift the miter gauge body until it is flush with the square, then re-tighten the handle (A).
3. Flip the stop plate (C) back down, and loosen the 90° stop hex nut and adjust the screw until it contacts the 90° stop plate.
4. Re-tighten hex nut.
5. Loosen the set screw at the base of the pointer, and shift the pointer so that it lines up with the 90° mark on the scale.
6. Re-tighten set screw.

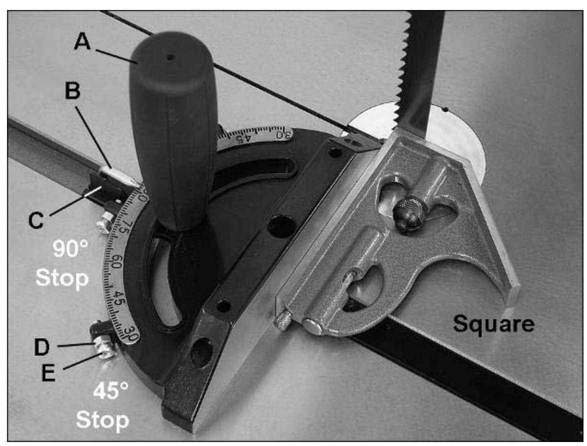


Figure 37

The 45° stops can be checked in similar fashion, using an angle gauge similar to that shown in Figure 37.

To adjust the miter gauge angle for operations:

1. Loosen the handle (A).
2. Rotate the gauge body until the pointer (B) lines up with the desired angle on the scale. You may have to pivot the 90° stop plate (C) out of the way to allow the body to rotate.
3. Tighten the handle (A).
4. There are three stops – at 90°, and 45° left and right. Each of these can be adjusted by loosening the hex nut (D) and turning the screw (E) as needed. Re-tighten the hex nut (D) when adjustment is finished.

Blade Speed Adjustment

Refer to Figures 38 through 40.

The band saw will operate at 1800 and 4200 SFPM (surface feet per minute). Figure 39 shows the appropriate belt position to achieve each speed.

To change the speed:

1. Disconnect machine from power source.
2. Loosen the *motor lock handle* and raise the *motor lift handle* to release tension on the belt.
3. Tighten the *motor lock handle* to keep motor in raised position.
4. Slide the belt onto the appropriate set of pulleys.
5. Loosen *motor lock handle* and allow motor to lower. The weight of the motor itself should produce the proper tension for the belt. Check the tension by pushing with moderate pressure against the center of the belt (Figure 40). An adequately tensioned belt will deflect about 1/2". If tension isn't strong enough, push down on the motor.
6. Tighten the motor lock handle.

Drive Belt Tension and Replacement

The drive belt and pulleys are properly adjusted at the factory. However, belt tension should be occasionally checked when the band saw is new, as a new belt may stretch slightly during the breaking-in process.

If the belt becomes worn, cracked, frayed or glazed, it should be replaced as follows:

Refer to Figures 38 and 40.

1. Disconnect machine from power source.

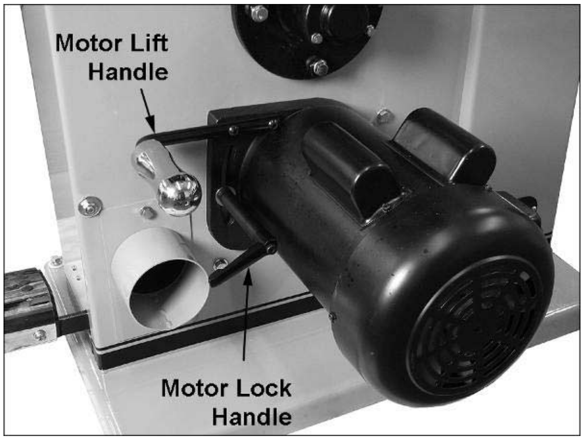


Figure 38

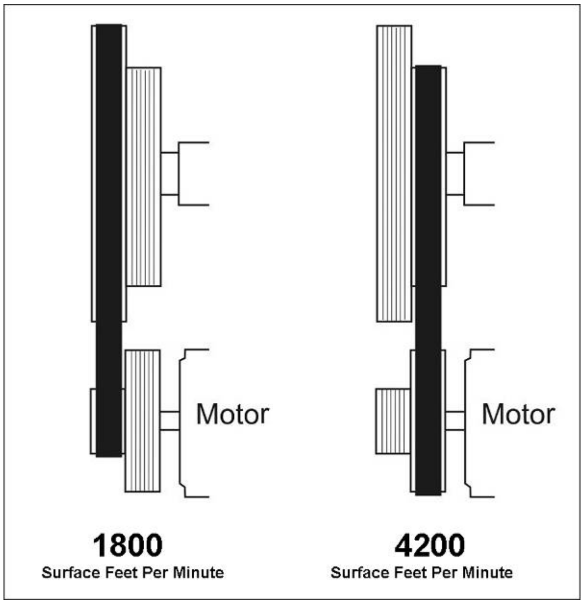


Figure 39

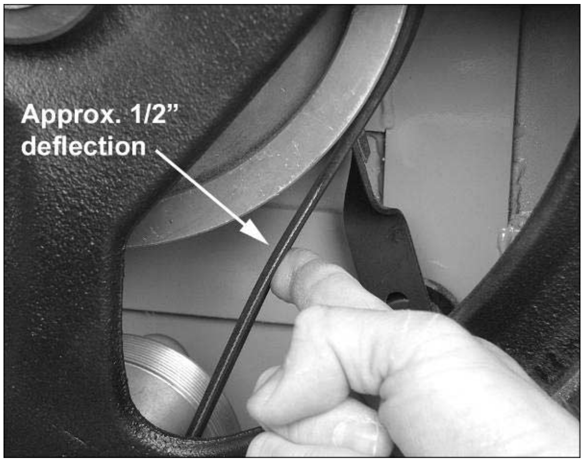


Figure 40

2. Open the upper and lower doors and remove the blade.
3. Unscrew the hex nut from the lower wheel shaft and remove the lower wheel.
4. Loosen the *motor lock handle*.
5. Raise the *motor lift handle* and re-tighten *motor lock handle* to hold motor in raised position.
6. Remove old belt and install new one, making sure it seats properly in the pulley grooves.
7. Loosen *motor lock handle* and allow motor to lower.
8. The weight of the motor itself should produce the proper tension for the belt. Check the tension by pushing with moderate pressure against the center of the belt (Figure 40). An adequately tensioned belt will deflect about 1/2”. If tension isn’t strong enough, push down on the motor.
9. Tighten *motor lock handle*, reinstall lower wheel, and install hex nut securely on shaft.
10. Re-check blade tension and tracking before operating the saw.

Wheel Brush

Refer to Figure 41.

The brush located next to the lower wheel must contact the tire to clear the tire of dust and debris before it touches the blade. Use the two phillips head screws to make any adjustments to the brush position.

Insert Block

Refer to Figure 41.

The insert block should remain in position to prevent dust and chips from falling onto the lower wheel. If it should ever become damaged, it should be replaced. Some band saw users make their own out of scrap wood.

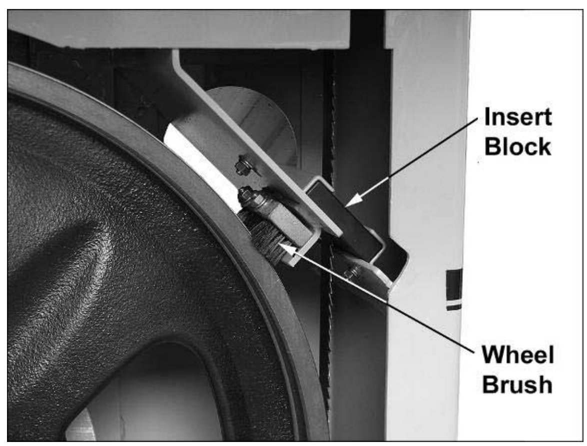


Figure 41

Operating Controls

Start/Stop

Power Indicator Light – The *start switch* has a power indicator lamp which is *on* ***whenever there is power connected*** to the Band Saw, not just when the Band Saw is running. *Do not assume that no light means there is no power to the machine.* If the bulb is bad, there will be no indication. Always check before use.

⚠WARNING Do not rely that no light means no power to the machine. Always check for power first. Failure to comply may cause serious injury!

Refer to Figure 42:

Start – Press the green start switch.

When power is connected to the machine, the green light is always on regardless of whether the Band Saw is running or not.

Stop – Press the red switch to stop.

Reset – In the event that the Band Saw stops without pressing the stop button, as the result of a tripped fuse or circuit breaker, etc.:

1. Press red button to re-set main switch.
2. Press the green button to restart the machine.

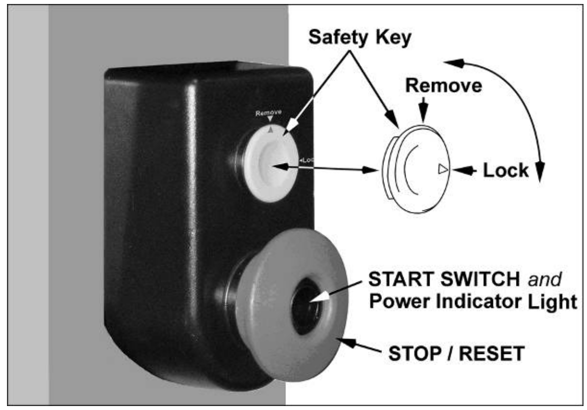


Figure 42

Safety Key

The start/stop switch on the Band Saw comes equipped with a magnetic safety key. When in place on the switch as shown in Figure 42, the magnetic safety key trips a relay which will allow the machine to start and stop when the respective switches are pressed. Being magnetic, the lock can be removed to make the machine inoperable and can be hidden for safe storage by attaching it to another magnetic surface.

When using the Band Saw, place the key on the switch cover lining up the arrow on the key with the REMOVE arrow on the cover. Then rotate the key so that the arrow lines up with the LOCK arrow on the cover. This will prevent the safety key from coming loose from vibration when the machine is in use.

Brake Pedal

When the stop button is used to shut off the Band Saw, the blade will coast slowly to a stop (approximately 12 to 15 seconds). An alternate method of stopping the machine is to press the *brake pedal*, shown in Figure 43. The blade will stop moving approximately four seconds after the brake pedal is pressed. Re-start the saw by pressing the start button on the column.

NOTE: Unnecessary and excessive use of the brake pedal may shorten the life of the brake band and brake belt.

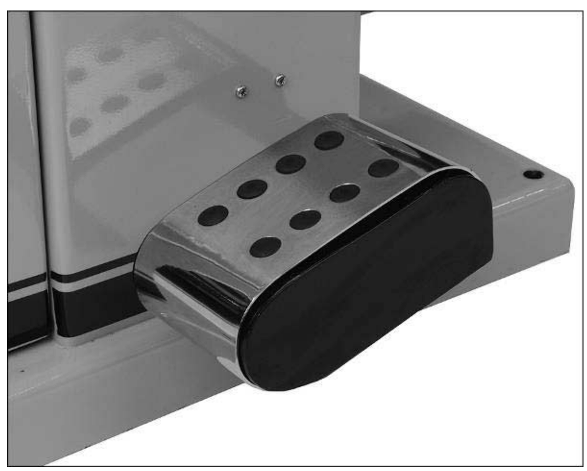


Figure 43

⚠WARNING After the machine is shut off, allow the wheels and blade to come to a complete stop before opening the doors, making adjustments, or leaving the area.

Operation

The following section contains basic information, and is not intended to cover all possible applications or techniques using the Band Saw. Consult published sources of information, acquire formal training, and/or talk to experienced Band Saw users to gain proficiency and knowledge of band saw operations.

General Procedure

1. Make sure the blade is adjusted correctly for tension and tracking, and that upper and lower guide bearings and thrust bearings are set in proper relation to the blade.
2. Adjust guide post so that the guide bearings are just above the workpiece (about 3/16") allowing minimum exposure to the blade.
3. If using the fence, move it into position and lock it to the guide rail. If you are using the miter gauge for a crosscut, the fence should be moved safely out of the way.
4. Turn on the band saw and allow a few seconds for the machine to reach full speed.

⚠WARNING Whenever possible, use a push stick, hold-down, power feeder, jig, or similar device while feeding stock, to prevent your hands getting too close to the blade.

5. Place the straightest edge of the workpiece against the fence for a rip cut; or against the miter gauge for a crosscut. Push the workpiece slowly into the blade, while also keeping it pressed against the fence or held against the miter gauge. Do not force the workpiece into the blade.

Some further operating tips:

Make *relief cuts* whenever possible. A relief cut is an extra cut made through the waste portion of a workpiece up to the layout line. When that intersection is reached by the blade while following the layout line, the waste portion comes free. This helps prevent pinching of the back edge of the blade in the cut.

⚠CAUTION When cutting, do not overfeed the blade; overfeeding will reduce blade life, and may cause the blade to break.

When cutting long stock, the operator should use roller stands, support tables, or an assistant to help stabilize the workpiece.

Ripping

Ripping is cutting lengthwise down the workpiece, and with the grain (of wood stock). See Figure 44. *Always use a push stick or similar device when ripping narrow pieces.*

Crosscutting

Crosscutting is cutting across the grain of the workpiece, while using the miter gauge to feed the workpiece into the blade.

The right hand should hold the workpiece steady against the miter gauge, while the left hand pushes the miter gauge past the blade, as shown in Figure 45.

Do not use the fence in conjunction with the miter gauge. The offcut of the workpiece must not be constrained during or after the cutting process.

⚠CAUTION Using the fence in conjunction with the miter gauge can cause binding and possible damage to the blade.

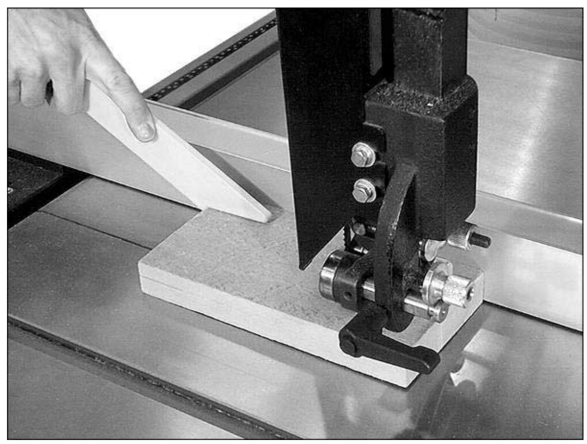


Figure 44

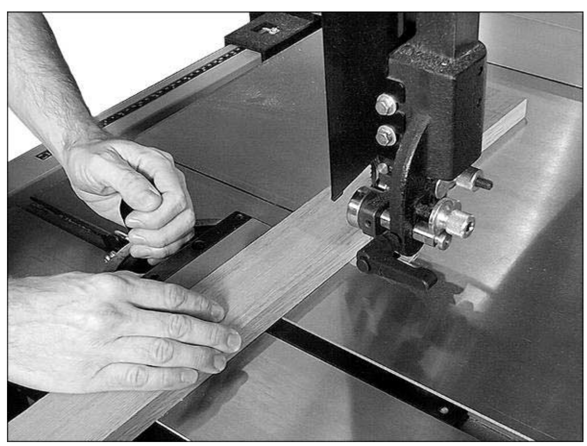


Figure 45

Resawing

Resawing is the process of slicing stock to reduce its thickness, or to produce boards that are thinner than the original workpiece, such as veneers.

The ideal blade for resawing is the widest one the machine can handle, as the wider the blade the better it can hold a straight line.

Resawing can be performed using the aluminum resaw fence or the resaw pin. When using the resaw fence, use a push block, push stick, or similar device to keep your hands away from the blade. The resaw pin offers a pivot point by which you can carefully follow your layout line; it is especially useful for sawing curves, when the fence can't be used and it's difficult to control the cut freehand.

Figure 46 demonstrates resawing with the aluminum resaw fence; Figure 47, with the resaw pin.

Blade Lead

Blade lead, or drift, is when the blade begins to wander off the cutting line even when the band saw fence is being used. Figure 48 shows an example of blade lead. It is more common with small, narrow blades, and is almost always attributable to poor blade quality, or lack of proper adjustments. Inspect the band saw for the following:

- Fence is not parallel to miter slot and blade.
- Blade is not tensioned correctly.
- Blade is dull.
- Teeth have too much "set" on one side of the blade.
- Workpiece is being fed too quickly.

If the blade is suspect, but replacing it is not currently an option, the blade lead can be temporarily compensated for by skewing the fence:

1. Cut a scrap piece of wood about the same length as the band saw table, and joint one edge along its length, or rip it on a table saw to give it a straight edge.
2. Draw a line on the board parallel with the jointed, or straight edge of the board.
3. Move the band saw fence out of the way, and carefully make a freehand cut along your drawn line on the board. Stop about midway on the board, and shut off the band saw (allow the blade to come to a complete stop) but do not allow the board to move.
4. Clamp the board to the table.

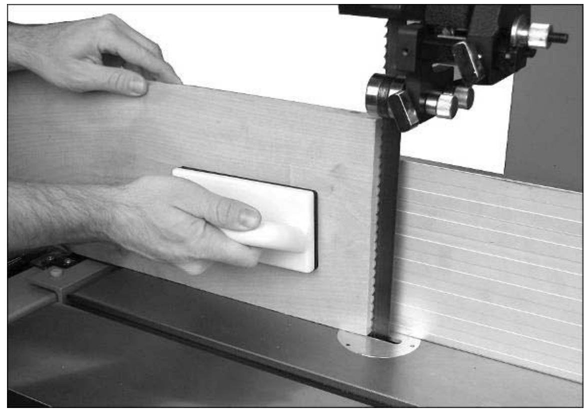


Figure 46

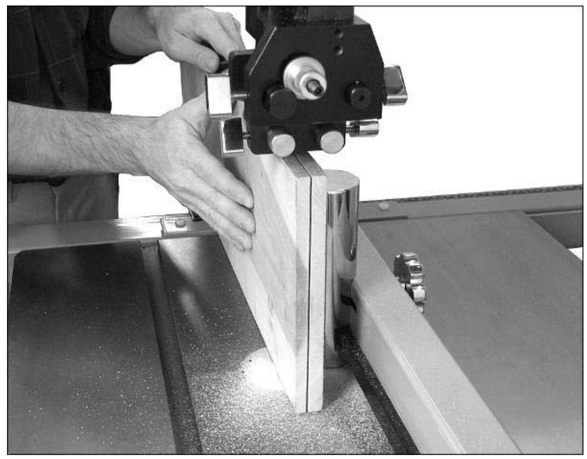


Figure 47

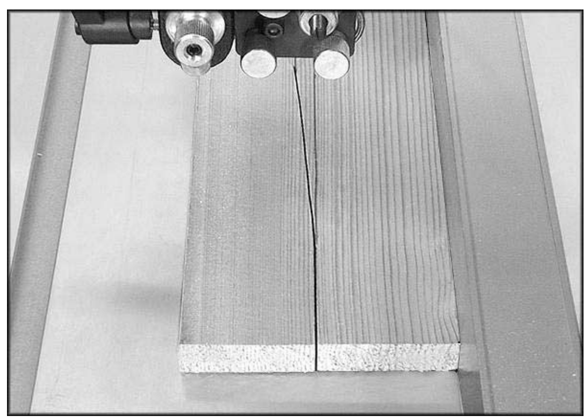


Figure 48

5. Slide the band saw fence over against the board until it contacts the straight edge of the board at some point. Lock the fence down.
6. Use the back adjustment screws (B, Figure 16) to line up the fence against the board.
7. Re-tighten the four hex cap screws.

NOTE: Skewing the fence to correct blade lead is effective for that particular blade; when a new blade is installed, the fence will need re-adjustment and re-squaring to miter slot. See appropriate section in this manual.

Maintenance

⚠WARNING Before doing maintenance on the machine, disconnect it from the electrical supply by pulling out the plug or switching off the main switch! Failure to comply may cause serious injury.

Clean the band saw regularly to remove any resinous deposits and sawdust.

Keep the miter slot, and the guide bearings, clean and free of resin.

Keep the blade clean and sharp. Check it periodically for cracks or other signs of wear.

The drive belt should be checked periodically. If it looks worn, frayed, glazed or otherwise damaged, replace it.

Remove any deposits from the band wheels to avoid vibration and potential blade breakage.

Vacuum or blow out dust from inside the cabinet. (Use proper dust mask equipment).

The table surface must be kept clean and free of rust for best results. If rust appears, you can use a mixture of household ammonia, good commercial detergent and #000 steel wool. Alternatively, commercial rust removers can be found at many hardware stores.

Apply a light coat of paste wax to the table. There are also products in aerosol form available in major hardware stores and supply catalogs. Whatever method is chosen, the coating should protect the metal and provide a smooth surface, without staining workpieces.

If the power cord is worn, cut, or damaged in any way, have it replaced immediately.

Lubrication Points:

Periodically apply a light, non-hardening grease to the rack and pinion system of the guide post (Figure 49).

Grease the sliding surfaces of the table trunnions (Figure 50). Also grease the contact area of the trunnion scale and handwheel gear (Figure 50) and the other gears connected to the handwheel (Figure 51).

Grease the blade tension screw (Figure 52).

Oil any pins, shafts, and joints. Do not get oil on the pulleys or belts.

Note: Bearings on the band saw are sealed for life and do not require lubrication.

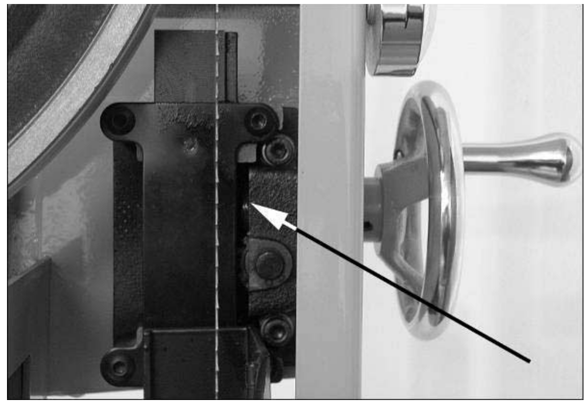


Figure 49

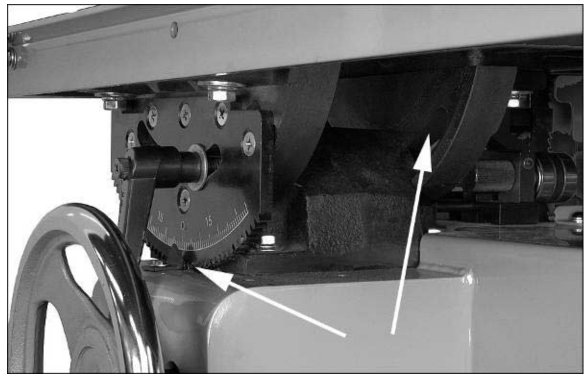


Figure 50

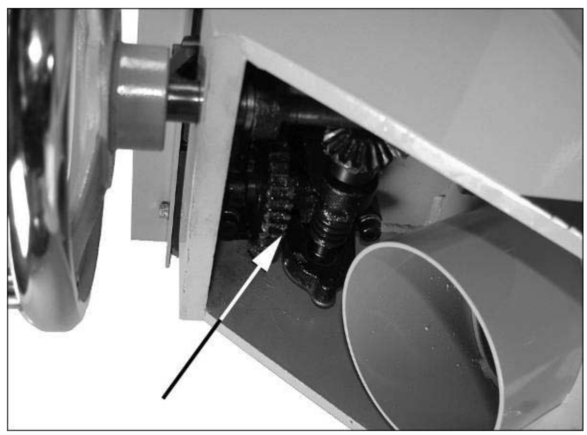


Figure 51

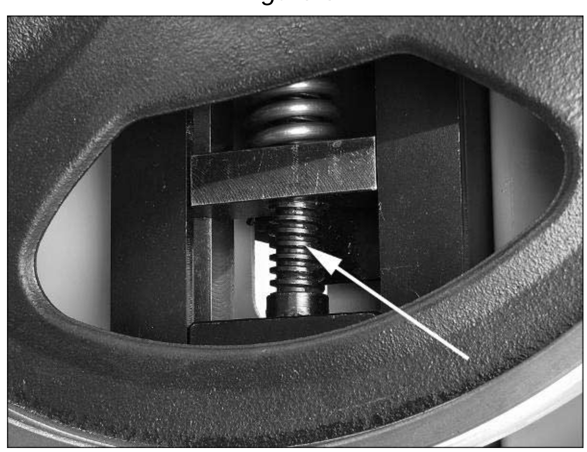


Figure 52

Blade Selection

Using the proper blade for the job will increase the operating efficiency of your band saw, help reduce necessary saw maintenance, and improve your productivity. Thus, it is important to follow certain guidelines when selecting a saw blade.

Here are factors to consider when selecting a blade:

- The type of material you will be cutting.
- The thickness of the workpiece.
- The features of the workpiece, such as bends or curves with small radii.

These factors are important because they involve basic concepts of saw blade design. There are five (5) blade features that are normally changed to meet certain kinds of sawing requirements. They are:

1. width
2. pitch (number of teeth per inch)
3. tooth form (or shape)
4. the “set” of the teeth
5. the blade material itself

Width

Band saw blades come in different standard widths, measured from the back edge of the blade to the tip of the tooth. Generally, wider blades are used for ripping or making straight cuts, such as resawing. Narrower blades are often used when the part being cut has curves with small radii. When cutting straight lines with a narrow blade, the blade may have a tendency to drift (see “Blade Lead”).

Pitch

Pitch is measured in “teeth per inch” (T.P.I.) and can be constant or variable. Figure 53 shows blades with different pitches.

A fine pitch (more teeth per inch) will cut slowly but more smoothly. A coarse pitch (fewer teeth per inch) will cut faster but more roughly.

As a rule of thumb, the thicker the workpiece, the coarser will be the blade pitch. If you have to cut a hard or very brittle material, you will probably want to use a blade with a finer pitch in order to get clean cuts.

Using a blade with too few teeth may cause vibration and a rough cut, while too many teeth may cause the gullets to fill with sawdust and overheat the blade.

As a general rule, use a blade that will have from 6 to 12 teeth in the workpiece at any given time.

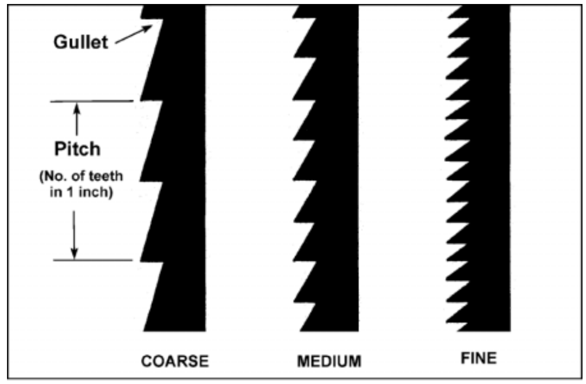


Figure 53 – Blade Pitch

Shape

Figure 54 shows common types of tooth shape, or form. Tooth shape has an effect on cutting rate.

The *Regular,* or standard blade, has evenly spaced teeth that are the same size as the gullets, and a zero-degree rake (i.e. cutting angle). These offer precise, clean cuts at slower rates. It is usually a good choice for cutting curves and making crosscuts.

The *Skip* type has fewer teeth and larger gullets with a zero rake. It allows faster cutting rates than the Regular type, with a slightly coarser finish. It is useful for re-sawing and ripping thick stock, as well as cutting softwoods.

The *Hook* type blade has larger teeth and gullets and a positive rake angle for more aggressive, faster cutting when re-sawing or ripping thick stock, especially hardwoods.

Variable-tooth blades combine features of the other shapes, with tooth style and spacing varying on the same blade. This produces smooth cuts while dampening vibration.

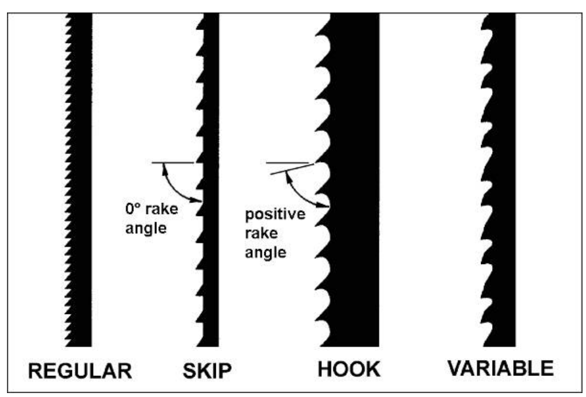


Figure 54 – Blade Tooth Shape

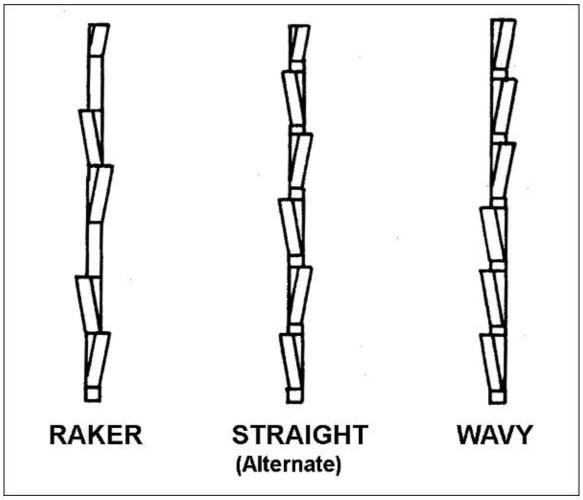


Figure 55 – Blade Set

Set

The term "set" refers to the way in which the saw teeth are bent or positioned. Bending the teeth creates a kerf that is wider than the back of the blade. This helps the operator more easily pivot a workpiece through curve cuts, and decreases friction between blade and workpiece on straight cuts.

Set patterns are usually selected depending upon the type of material that needs to be cut. Three common set patterns are shown in Figure 55.

Generally, the *Raker* set is used for cutting metal workpieces; the *Wavy* set, when the thickness of the workpiece changes, such as cutting hollow tubing or structurals. The *Straight*, or *Alternate*, set is the one most used for woodworking blades, and is also used to cut plastics.

Material

Band saw blades can be made from different types of metals. The most common include spring steel, carbon steel, bimetal (alloy steel equipped with a high speed cobalt steel edge welded to it), or carbide tips.

Because of the importance of blade selection, it is recommended that you use the blade selection guide on page 31. Also, listening to experienced band saw users will produce valuable information as to the types of blades currently on the market along with their pros and cons.

Blade Breakage

Band saw blades are subject to high stresses and breakage may sometimes be unavoidable. However, many factors can be controlled to help prevent most blade breakage. Here are some common causes for breakage:

1. Misalignment of the blade guides.
2. Feeding workpiece too quickly.
3. Using a wide blade to cut a tight radius curve.
4. Excessive tension.
5. Teeth are dull or improperly set.
6. Upper guides are set too high off the workpiece.
7. Faulty weld on blade.

Although not essential, some users round or "stone" the back edge of their blade. This is done by placing a sharpening stone on the table and in light contact with the back corners of the blade as the blade is running. Rounding can help the back blade edge move more smoothly through the kerf, smooths the weld, and helps prevent cracks from starting at the back corners.

Blade Selection Guide

Identify the material and thickness of your workpiece. The chart will show the recommended PITCH, blade TYPE, and FEED RATE.

Key: H – Hook L – Low
S – Skip M – Medium
R – Regular H – High

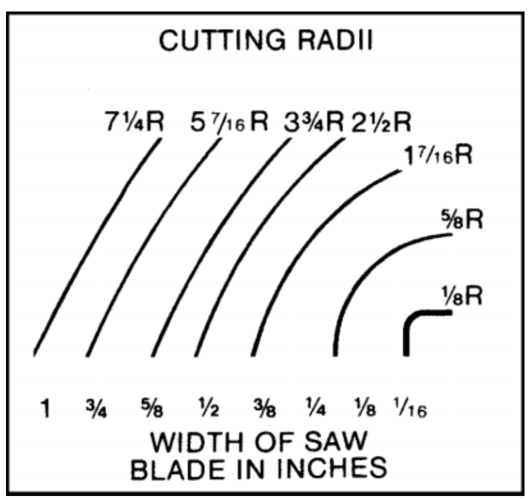
Example: 10/H/M means 10 teeth per inch / Hook Type Blade / Medium Feed

MATERIAL/S		WORKPIECE THICKNESS ½″	1″	3″	6+″
WOODS	HARDWOOD	10/R/L	8/R/L	3/H/M	3/H/M
	SOFTWOOD	10/R/L	8/R/L	3/H/M	3/H/M
NON-METALS	CARBON	10/R/L	6/R/L	3/S/M	3/S/M
	MICA	32/R/L	—	—	—
	ASBESTOS	8/R/L	6/R/L	3/S/M	3/S/M
	HARD RUBBER	10/R/L	8/R/L	6/R/M	2/S/H
PLASTICS	FORMICA	14/R/M	10/R/M	4/H/H	4/H/H
	MASONITE	10/R/L	4/S/L	3/S/M	3/H/M
	MICARTA	14/R/M	10/R/M	4/H/H	3/H/H
	PLEXIGLAS	10/R/L	6/R/L	3/S/M	3/S/M
	PAPER	14/R/L	10/R/L	4/S/L	3/S/M

For Radius Cutting

Study the part drawing or prototype, or actually measure the smallest cutting radius required, and locate this radius (in inches) on the chart at the right. Follow the curve to where the approximate blade width is specified. If a radius falls between two of the curves, select the widest blade that will saw this radius.

This procedure should be used for making initial blade selections. These recommendations can, of course, be adjusted to meet specific requirements of a cutting job. Compromises may be necessary if you cannot find all needed specifications in a single blade.



Troubleshooting – Operational Problems

Trouble	**Probable Cause**	**Remedy**
Table tilt does not hold position under load.	Locking lever is not tight.	Tighten locking lever (A, Figure 20).
	Trunnion locking mechanism is broken or worn.	Replace trunnion locking mechanism.
Table will not tilt.	Trunnion is not lubricated.	Lubricate trunnion.
	Trunnion is jammed.	Disassemble and replace jammed parts.
Table vibration while sawing.	Incorrect blade speed.	Position belt for correct speed (see page 23). Also use acceptable feed rate for the material being worked.
	Drive belt is too slack.	Increase tension on drive belt. (see page 23). Replace belt if worn.
	Incorrect choice of saw blade pitch.	Check blade selection chart and use correct blade (see page 31).
	Saw dust or debris on band wheel. Or tire is worn/damaged.	Keep band wheels clean. Replace tires if necessary.
	Support bearing(s) are worn.	Replace support bearings.
Surface finish on workpiece is rough.	Saw blade speed is too low.	Increase speed.
	Saw blade pitch is too coarse.	Change to finer pitch blade.
Saw blade cutting inaccurately. Cuts are not straight.	Gum or pitch on blade.	Clean blade.
	Worn blade teeth or damaged blade.	Replace blade.
	Fence not parallel to blade.	Align fence properly (see page 13).
	Incorrect adjustment of blade guides.	Adjust blade guides properly (see pages 19-20).
	Incorrect blade speed used.	Change to correct speed.
	Workpiece being fed too strongly.	Reduce feed force.
	Upper blade guides not located close enough to workpiece.	Guides should be about 3/16” above workpiece.
	Incorrect choice of saw blade for that particular cutting operation.	Change to correct blade.
	Blade tension too light.	Increase tension (see page 17).
Blade can not be tensioned properly.	Tension spring is fatigued.	Replace tension spring (contact service representative).
Blade binds in the workpiece.	Incorrect blade tension or damaged blade.	Correct accordingly.
	Blade too wide for desired radius.	Select narrower blade. See chart on page 31.

Trouble	Probable Cause	Remedy
Blade forms cracks at base of teeth.	Teeth not suitable for particular job, or are incorrectly set.	Replace with proper blade for job.
	Blade thickness not suitable for band wheel diameter.	Replace with proper thickness blade.
	Blade sharpened incorrectly, becomes overheated.	Sharpen blade properly or replace.
	Band wheels have become misaligned.	Contact service representative.
Cracks on back edge of blade.	Workpiece being fed too quickly.	Reduce feed speed to lessen strain on the blade.
	Welding on blade not perfectly aligned.	Eliminate the welded part, and re-weld properly; or acquire a new blade. Round the back edge of a new blade.
	Thrust bearing is worn; caused by constant contact with back of blade.	Replace thrust bearing. Adjust new bearing according to instructions (see page 20).
Blade breaks prematurely.	Feed force too great.	Reduce feed force.
	Blade pitch too coarse.	Refer to blade selection chart; use finer pitch blade.
	Support bearing not properly supporting blade.	Check support bearing for correct position and signs of wear. Adjust or replace as needed.
	Blade tensioned too tightly.	Reduce tension (see page 17).
Blade breaks close to weld.	Blade overheated during welding.	Have blade annealed, or eliminate brittle part and weld correctly.
	Blade cooled too rapidly after welding.	Have blade annealed, or eliminate brittle part and weld correctly.
Premature dulling of saw teeth.	Blade “pitch” too fine.	Refer to blade selection chart (page 31). Use blade with coarser pitch.
	Feed pressure too light.	Increase feed pressure.
	Cutting rate too low.	Increase feed pressure and cutting rate.
	Incorrect choice of blade.	Re-examine material. Select proper blade from the chart (page 31).
	Chipped tooth or foreign object lodged in cut.	Stop the saw and remove lodged particle. Replace blade if damaged.

Troubleshooting – Mechanical and Electrical Problems

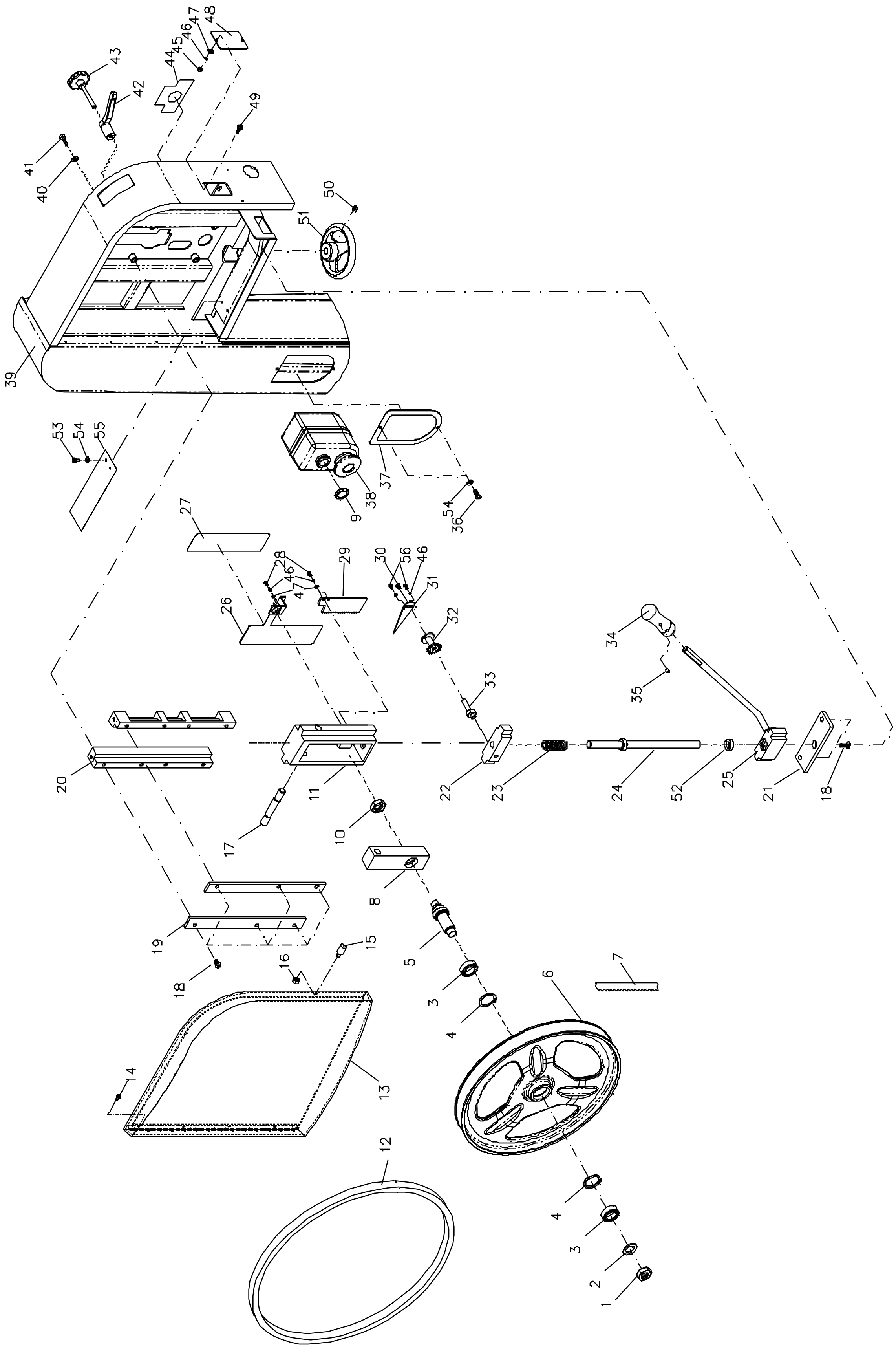
Trouble	Probable Cause	Remedy
Machine will not start/restart or repeatedly trips circuit breaker or blows fuses.	No incoming power.	Verify machine is connected to power source, and that the safety key is installed on the switch.
	Cord damaged.	Replace cord.
	Overload automatic reset has not been reset.	Re-set the overload by pushing in completely the OFF (red) button on the magnetic switch. Allow a few minutes for the machine to cool. If problem persists, check amp setting on the motor starter.
	Band Saw frequently trips.	One cause of overloading trips which are not electrical in nature is too heavy a cut. The solution is to reduce feed pressure into the blade. If too heavy a cut is not the problem, then check the amp setting on the overload relay. Match the full load amps on the motor as noted on the motor plate. If amp setting is correct then there is probably a loose electrical lead. Check amp setting on motor starter.
	Building circuit breaker trips or fuse blows.	Verify that band saw is on a circuit of correct size. If circuit size is correct, there is probably a loose electrical lead. Check amp setting on motor starter.
	Switch or motor failure (how to distinguish).	If you have access to a voltmeter, you can separate a starter failure from a motor failure by first, verifying incoming voltage at 220+/-20 and second, checking the voltage between starter and motor at 220+/-20. If incoming voltage is incorrect, you have a power supply problem. If voltage between starter and motor is incorrect, you have a starter problem. If voltage between starter and motor is correct, you have a motor problem.
	Motor overheated.	Clean motor of dust or debris to allow proper air circulation. Allow motor to cool down before restarting.
	Motor failure.	If electric motor is suspect, you have two options: Have a qualified electrician test the motor for function or remove the motor and take it to a qualified electric motor repair shop and have it tested.

Trouble	Probable Cause	Remedy
Machine will not start/restart or repeatedly trips circuit breaker or blows fuses. *(continued)*	Miswiring of the unit.	Double check to confirm all electrical connections are correct. Refer to wiring diagram on page 47 to make any needed corrections.
	Switch failure.	If the start/stop switch is suspect, you have two options: Have a qualified electrician test the switch for function, or purchase a new start/stop switch and establish if that was the problem on change-out.
Band Saw does not come up to speed.	Extension cord too light or too long.	Replace with adequate size and length cord.
	Low current.	Contact a qualified electrician.

Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848, Monday through Friday (see our website for business hours, www.powermatic.com). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

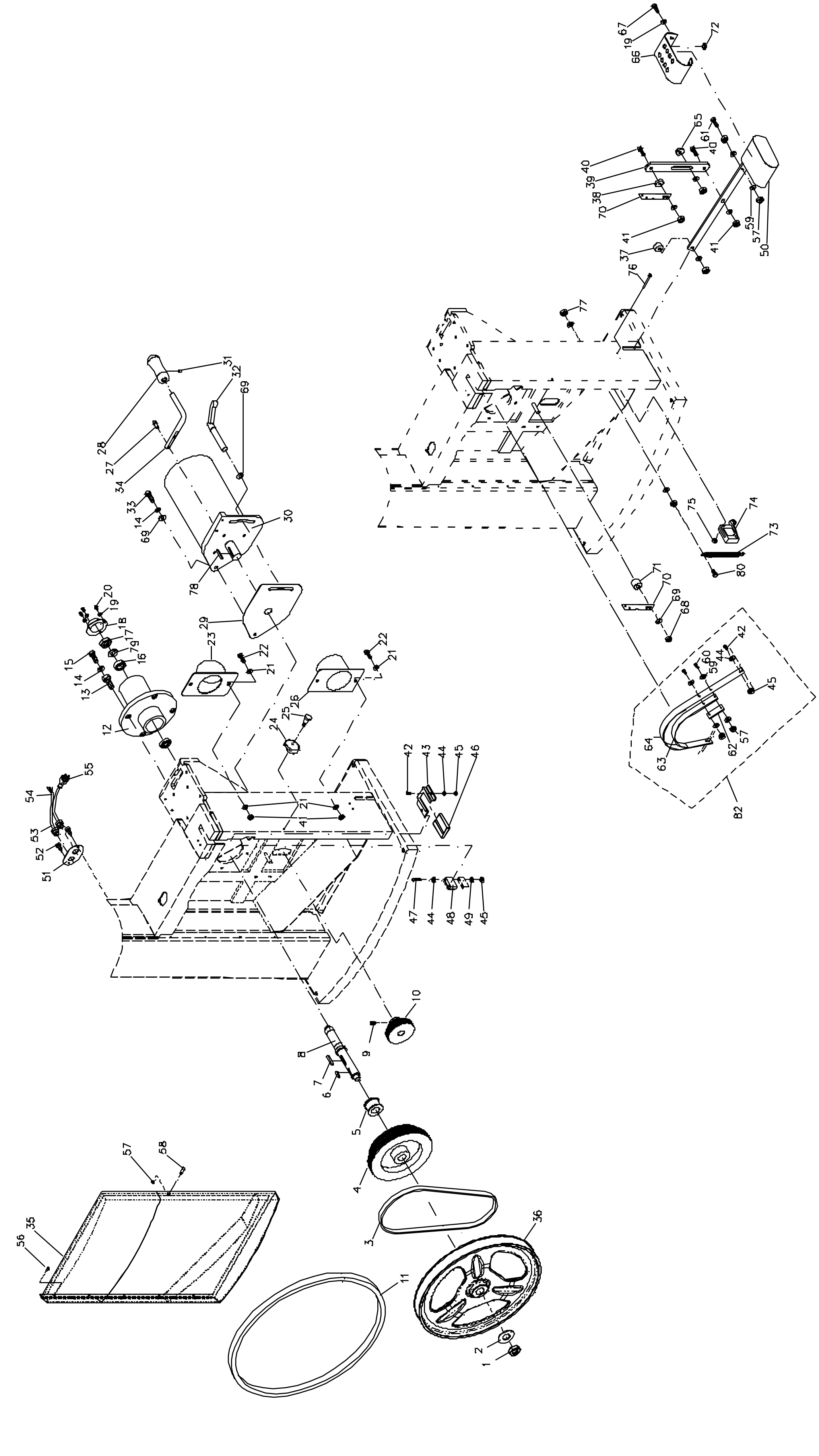
Upper Wheel Assembly – Exploded View



Upper Wheel Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JWBS18-135	Hex Nut	5/8-18UNF, LH	1
2	PM1800-102	Flat Washer		1
3	BB-6204VV	Ball Bearing	6204LLU	2
4	PM1800-104	Retaining Ring	R47	2
5	PM1800-105	Upper Wheel Shaft		1
6	PM1800-106	Upper Wheel		1
7	PM1800-107	Blade		1
8	JWBS20QT-507	Upper Wheel Shaft Bracket		1
9	PM2000-298	Safety Key for Magnetic Switch		1
10	JWBS18-214	Nylon Nut	5/8"-18UNF, RH	1
11	JWBS20QT-510	Upper Wheel Bracket Base		1
12	JWBS18DX-133	Tire		1
13	PM1800-113	Upper Door		1
14	TS-2246122	Socket Head Button Screw	M6x12	4
15	JWBS20-542	Door Stud		1
16	TS-0561011	Hex Nut	1/4-20	1
17	JWBS20QT-511	Bracket Shaft		1
18	PM1800-118	Socket Head Button Screw	3/8-16x3/4	8
19	JWBS20QT-519	Plate		2
20	JWBS20QT-520	Support Bracket		2
21	JWBS20QT-516	Plate		1
22	JWBS20QT-512	Elevator Bracket		1
23	PM1800-123	Spring		1
24	PM1800-124	Adjustment Screw		1
25	PM1800-125	Blade Tension Arm Assembly		1
26	PM1800-126	Tension Gauge Plate		1
27	PM1800-127	Tension Gauge		
28	TS-0206021	Socket Head Cap Screw	#10-24x1/2	4
29	JWBS20QT-523	Rack		1
30	TS-0254031	Socket Head Button Screw	1/4-20x5/8	1
31	PM1800-131	Tension Pointer		1
32	JWBS20QT-549	Gear Wheel		1
33	JWBS20QT-548	Scale Shaft		1
34	PM1800-134	Handle		1
35	TS-0270031	Socket Set Screw	5/16-18x3/8	2
36	TS-0254021	Socket Head Button Screw	1/4-20x1/2	2
37	JWBS18DXA-152	Switch Plate		1
38	PM1800-138	Magnetic Switch	5HP, 1Ph	1
	PM2000-293B	Magnetic Switch	5HP, 230V, 3Ph	1
	PM2000-293C	Magnetic Switch	5HP, 460V, 3Ph	1
39	PM1800-139	Saw Body		1
40	TS-0680041	Flat Washer	3/8	6
41	TS-0060071	Hex Cap Screw	3/8-16x1-1/2	6
42	PM1800-142	Lock Handle		1
43	PM1800-143	Lock Knob		1
44	PM1800-144	Tension Status Label		1
45	TS-0560071	Hex Nut	#10-24	2
46	TS-0720051	Lock Washer	#10	8
47	TS-0680011	Flat Washer	#10	8
48	JWBS18DX-147	Tracking Window		1
49	TS-0810012	Round Head Slotted Machine Screw	#10-24x1/4	2
50	TS-0270051	Socket Set Screw	5/16-18x1/2	2
51	PM1800-151	Handwheel		1
52	JWBS20QT-515	Thrust Bearing		1
53	PM1800-153	Socket Head Cap Screw	1/4-20x1/4	2
54	TS-0680021	Flat Washer	1/4	4
55	PM1800-155	Sliding Plate		1
56	TS-081C022	Phillips Pan Head Machine Screw	#10-24x3/8	2

Lower Wheel and Motor Assembly – Exploded View

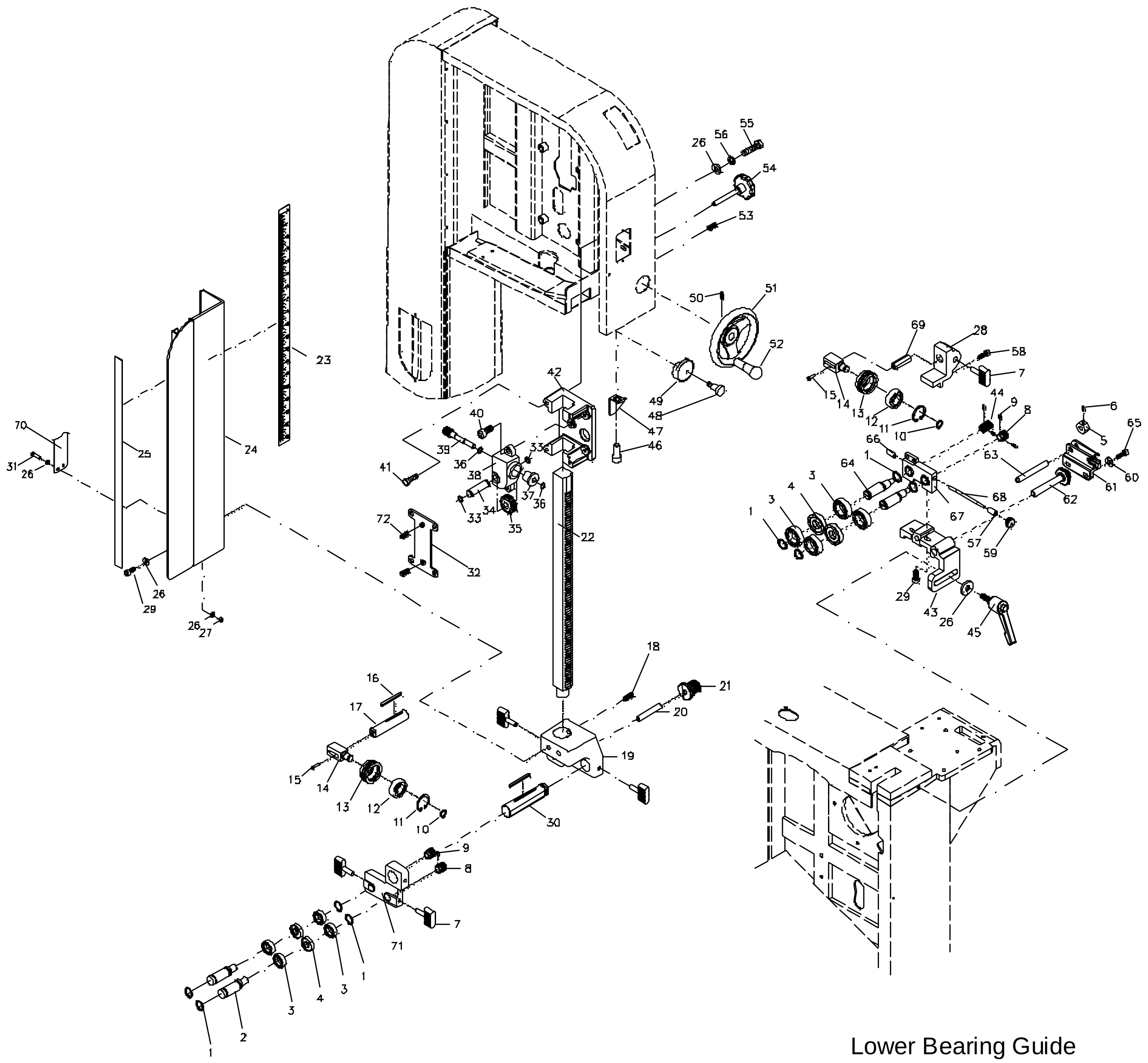


Lower Wheel and Motor Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JWBS20-22	Hex Nut	3/4-16 UNF LH	1
2	TS-0680091	Flat Washer	3/4	1
3	PM1800-201	Poly-V Belt	370J	1
4	PM1800-204	Spindle Pulley		1
5	PM1800-205	Brake Wheel		1
6	JWBS20-49	Key	7x7x25	1
7	PM1800-207	Key	7x7x70	1
8	PM1800-208	Lower Shaft		1
9	TS-0270051	Socket Set Screw	5/16-18x1/2	2
10	PM1800-210	Motor Pulley		1
11	JWBS18DX-133	Tire		1
12	JWBS20-201	Bearing Base		1
13	JWBS20-62	Adjusting Bolt		4
14	TS-0720091	Lock Washer	3/8	5
15	TS-0060071	Hex Cap Screw	3/8-16x1-1/2	4
16	BB-6206VV	Ball Bearing	6206LLU	2
17	JWBS20-214	Nylon Lock Hex Nut	3/4-16 UNF RH	1
18	JWBS20-215	Bearing Cover		1
19	TS-0720071	Lock Washer	1/4	4
20	JWBS20-217	Hex Cap Screw	1/4-20x3/8	3
21	TS-0680031	Flat Washer	5/16	4
22	TS-0081031	Hex Cap Screw	5/16-18x3/4	4
23	PM1800-223	Dust Chute		1
24	PM1800-224	Lock Knob		1
25	TS-081C052	Phillips Pan Head Machine Screw	#10-24x3/4	1
26	PM1800-226	Lower Dust Chute		1
27	PM1800-227	Socket Head Button Screw	5/16-18x1	2
28	PM1800-134	Handle		1
29	PM1800-229	Motor Protector Plate		1
30	PM1800-230	Motor (includes #PM1800-229)	1Ph	1
	JWBS20QT-218MF	Motor Fan (not shown)	5HP	1
	JWBS20QT-218MFC	Motor Fan Cover (not shown)	5HP	1
	PM1800-230SC	Starting Capacitor (not shown)	400MFD, 250VAC	1
	JWBS20QT-218RC	Running Capacitor (not shown)	50μf, 450VAC	1
	JWBS20QT-218CC	Capacitor Cover (not shown)		1
	JWBS20QT-218JB	Junction Box (not shown)		1
	VBS18MW-218JBC	Junction Box Cover (not shown)		1
	JWBS20QT-218CS	Centrifugal Switch (not shown)		1
	PM1800-230A	Motor (includes #PM1800-229)	3Ph	1
31	TS-0270031	Socket Set Screw	5/16-18x3/8	2
32	PM1800-232	Lock Handle		1
33	TS-0060051	Hex Cap Screw	3/8-16x1	1
34	PM1800-234	Motor Handle		1
35	PM1800-235	Lower Front Door		1
36	PM1800-236	Lower Wheel		1
37	PM1800-237	Bushing		1
38	PM1800-238	Bushing		1
39	PM1800-239	Brake Locking Bracket		1
40	TS-0090061	Hex Cap Screw	3/8-16x1-1/4	2
41	PM1800-241	Nylon Lock Hex Nut	3/8-16	4
42	TS-081C032	Phillips Pan Head Machine Screw	#10-24x1/2	6
43	PM1800-243	Shelf		1
44	TS-0680011	Flat Washer	#10	10
45	TS-0560071	Hex Nut	#10-24	8
46	JWBS18DX-249	Insert Block		1
47	TS-081C082	Phillips Pan Head Machine Screw	#10-24x1-1/2	2
48	JWBS18-240	Brush		1

Index No.	Part No.	Description	Size	Qty
49	TS-0720051	Lock Washer	#10	2
50	PM1800-250	Foot Brake		1
51	PM1800-251	Plate		1
52	TS-081C022	Phillips Pan Head Machine Screw	#10-24x3/8	2
53	PM1800-253	Strain Relief		2
54	PM1800-254	Motor Cord		1
55	JWBS20QT-244	Power Cord	1Ph.	1
	PM1800-255A	Power Cord	3Ph.	1
56	TS-2246122	Socket Head Button Screw	M6x12	5
57	TS-0561011	Hex Nut	1/4-20	5
58	JWBS20-542	Door Stud		1
59	TS-0680021	Flat Washer	1/4	10
60	TS-0050021	Hex Cap Screw	1/4-20x5/8	2
61	TS-0010061	Hex Cap Screw	1/4-20x1-1/4	1
62	JWBS24-81A	Plate		2
63	PM1800-263	Brake Belt		1
64	PM1800-264	Brake Band		1
65	PM1800-265	Bushing		1
66	PM1800-266	Foot Brake Cover		1
67	TS-0050011	Hex Cap Screw	1/4-20x1/2	4
68	TS-0640091	Nylon Lock Hex Nut	3/8-16	4
69	TS-0680041	Flat Washer	3/8	9
70	PM1800-270	Brake Locking Bracket		2
71	PM1800-271	Bushing		1
72	PM1800-272	Rubber Block		8
73	JWBS20-84	Spring		1
74	JWBS20-88	Limit Switch		1
75	TS-1540021	Hex Nut	M4	2
76	TS-2284302	Phillips Pan Head Machine Screw	M4x30	2
77	TS-0561031	Hex Nut	3/8-16	2
78	PM1800-278	Key	7x7x60	1
79	TS-0680091	Flat Washer	3/4	1
80	TS-0051071	Hex Cap Screw	5/16-18x1-1/2	1
81	PM1800-281	Wire for Limit Switch (not shown)		1
82	PM1800-BA	Brake Assembly (index # 42,44,45,57,59,60,62,63,64)		1

Blade Guide Assembly – Exploded View



Lower Bearing Guide

Upper Bearing Guide

Blade Guide Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	JWBS20-326	C-Ring	S15	8
2	JWBS20-329	Upper Shaft		2
3	BB-6202ZZ	Ball Bearing	6202zz	8
4	JWBS20-328	Spacer		4
5	JWBS18DX-363	Nut		1
6	TS-0267021	Socket Set Screw	1/4-20x1/4	1
7	PM1800-307	Locking Screw		5
8	JWBS20-349	Thumb Knob		3
9	TS-1521011	Socket Set Screw	M4x4	8
10	PM1800-310	C-Ring	S-10	2
11	PM1800-311	Retaining Ring	R-26	2
12	BB-6000ZZ	Ball Bearing	6000ZZ	2
13	PM1800-313	Bearing Holder		2
14	PM1800-314	Bearing Support		2
15	TS-2245202	Socket Head Button Screw	M5x20	2
16	PM1800-316	Key	5x5x40	2
17	PM1800-317	Bearing Support Shaft		1
18	TS-0270051	Socket Set Screw	5/16-18x1/2	2
19	PM1800-319	Guide Bar Bracket		1
20	TS-0270131	Socket Set Screw	5/16-18x2	1
21	6295297	Adjustment Knob		1
22	PM1800-322	Bar		1
23	PM1800-323	Scale		1
24	PM1800-324	Blade Guard		1
25	PM1800-325	Magnet		1
26	TS-0680031	Flat Washer	5/16	11
27	TS-0561021	Hex Nut	5/16-18	2
28	JWBS20-360	Bracket		1
29	TS-0208031	Socket Head Cap Screw	5/16-18x5/8	2
30	PM1800-330	Shaft		1
31	TS-0255031	Socket Head Button Screw	5/16-18x5/8	4
32	PM1800-332	Plate		1
33	JWBS18-309	C-Ring	R12	2
34	JWBS18-310	Shaft		1
35	JWBS18-311	Gear		1
36	JWBS18-306	E-Ring	E-8	2
37	JWBS18-308	Bushing		1
38	JWBS18-307	Gear Base		1
39	JWBS18-305	Worm		1
40	TS-0208071	Socket Head Cap Screw	5/16-18x1-1/4	2
41	TS-0255021	Socket Head Button Screw	5/16-18x1/2	4
42	JWBS18DX-304	Guide Bar Bracket		1
43	JWBS18DX-338	Base		1
44	PM1800-344	Thumb Knob		1
45	PM1800-345	Lock Handle		1
46	TS-0207021	Socket Head Cap Screw	1/4-20x1/2	1
47	PM1800-347	Pointer		1
48	TS-081F052	Phillips Pan Head Machine Screw	1/4-20x3/4	1
49	PM1800-224	Lock Knob		1
50	TS-0267041	Socket Set Screw	1/4-20x3/8	2
51	PM1800-351	Handwheel		1
52	3520B-126	Handle		1
53	TS-0270031	Socket Set Screw	5/16-18x3/8	2
54	PM1800-354	Lock Knob		1
55	TS-0051051	Hex Head Bolt	5/16-18x1	4
56	TS-0720081	Lock Washer	5/16	4
57	JWBS20-355	Lock Bushing		1

Index No.	Part No.	Description	Size	Qty
58	TS-0207021	Socket Head Cap Screw	1/4-20x1/2	2
59	PM1800-359	Knob		1
60	TS-0680021	Flat Washer	1/4	2
61	JWBS18DX-362	Adjusting Bracket		1
62	JWBS18DX-361	Adjusting Screw		1
63	JWBS18DX-360	Shaft		1
64	PM1800-364	Lower Shaft		2
65	TS-0207041	Socket Head Cap Screw	1/4-20X3/4	2
66	JWBS20-339	Threaded Lock Bushing		1
67	JWBS18DX-337	Bracket		1
68	JWBS20-340	Bolt		1
69	PM1800-369	Bearing Support Shaft		1
70	PM1800-370	Sliding Plate		1
71	PM1800-371	Upper Guide Bracket		1
72	TS-0267021	Socket Set Screw	1/4-20x1/4	2

Table and Fence Assembly – Exploded View

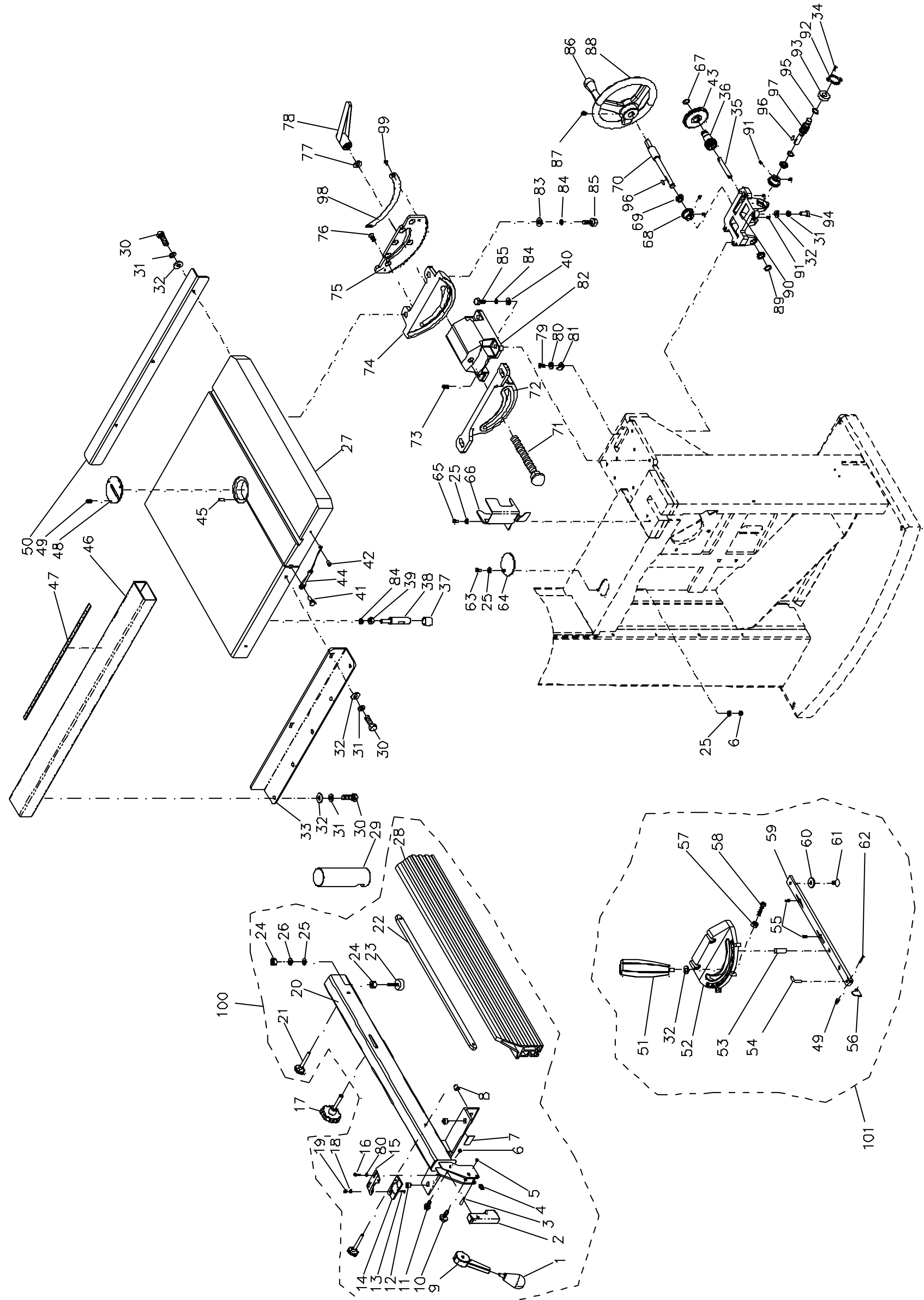
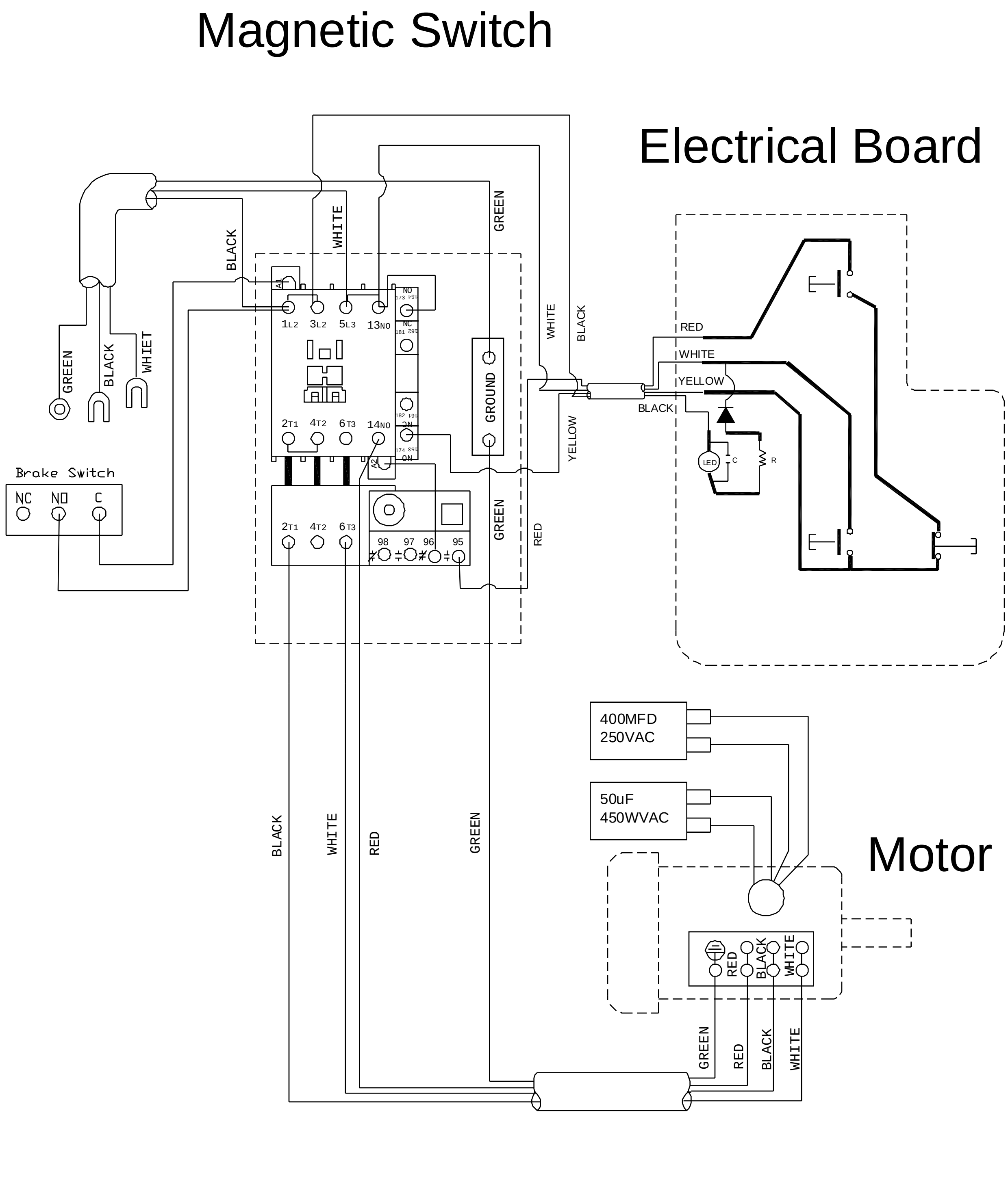


Table and Fence Assembly – Parts List

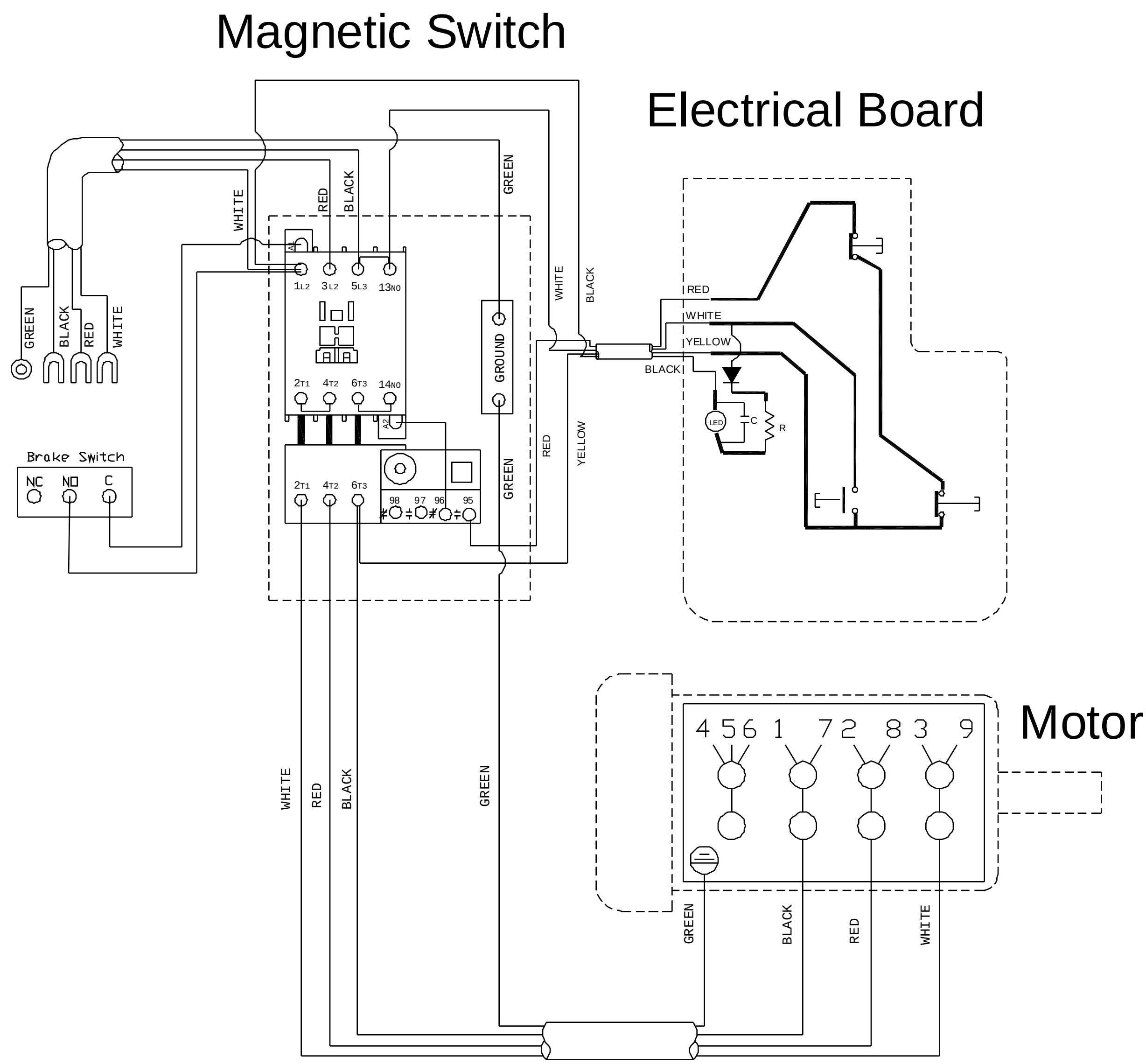
Index No.	Part No.	Description	Size	Qty
1	6430055	Handle		1
2	3215301	Lock Plate		1
3	6626031	Spring Pin		1
4	6813042	Spring		1
5	TS-0640081	Nylon Lock Hex Nut	5/16-18	1
6	TS-0640071	Nylon Lock Hex Nut	1/4-20	2
7	3575080	Pad		2
8	TS-0271031	Socket Set Screw	3/8-16x3/8	2
9	3076232	Lock Handle		1
10	TS-0152031	Carriage Bolt	5/16-18x1-1/2	1
11	PM1800-411	Socket Head Button Screw	1/4-20x1-1/4	1
12	XF-5	Nylon Adjustment Screw		2
13	TS-081D021	Phillips Flat Head Machine Screw	#10-32x3/8	2
14	800708950D	Cursor		1
15	800708950C	Cursor Bracket		1
16	TS-081D022	Phillips Pan Head Machine Screw	#10-32x3/8	2
17	PM1800-417	Resaw Pin Lock Knob		1
18	TS-0720051	Lock Washer	#10	2
19	TS-0560081	Hex Nut	#10-32	2
20	PM1800-420	Fence Body		1
21	PM1800-421	Knob		2
22	PM1800-422	Lock Bar		1
23	6295181	Sliding Pad		1
24	TS-0561011	Hex Nut	1/4-20	2
25	TS-0680021	Flat Washer	1/4	5
26	TS-0720071	Lock Washer	1/4	1
27	PM1800-427A	Table *(for serial no. 081218000016 and higher)*		1
	PM1800-427	Table *(for serial no. 081218000015 and lower)*		1
28	PM1800-428	Aluminum Resaw Fence		1
29	PM1800-429	Resaw Pin		1
30	TS-0081031	Hex Cap Screw	5/16-18x3/4	10
31	TS-0733051	Lock Washer	5/16	14
32	TS-0680031	Flat Washer	5/16	15
33	PM1800-433	Front Rail		1
34	TS-081C022	Phillips Pan Head Machine Screw	#10-24x3/8	2
35	PM1800-435	Shaft		1
36	PM1800-436	Worm		1
37	PM1800-437	Sheath		1
38	PM1800-438	Stop Bolt		1
39	TS-0561031	Hex Nut	3/8-16	1
40	TS-0680041	Flat Washer	3/8	4
41	PM1800-441	Taper Pin		1
42	TS-2246122	Socket Head Button Screw	M6x12	1
43	PM1800-443	Gear		1
44	PM1800-444	Wrench Assembly		1
45	PM1800-445	Spring Pin	3x10	1
46	PM1800-446	Guide Rail		1
47	6295184	Scale		1
48	PM1800-448	Table Insert		1
49	TS-1521011	Socket Set Screw	M4x4	3
50	PM1800-450	Rear Rail		1
	PM1800-MGA	Miter Gauge Assembly (Item 32, 49, 51 thru 62)		1
51	PM1800-451	Handle		1
52	6295167	Miter Gauge Body		1
53	6295168	Pin		1
54	6295169	Pointer		1
55	PM1800-455	Socket Set Screw	M8x6	2

Index No.	Part No.	Description	Size	Qty
56	6295171	Stop Block		1
57	TS-1540031	Hex Nut	M5	3
58	TS-1533062	Screw	M5x20	3
59	PM1800-459	Miter Bar		1
60	6295163	Guide Disc		1
61	PM1800-461	Flat Head Screw	M6x9	1
62	PM1800-462	Pin	3x6	1
63	TS-0254031	Socket Head Button Screw	1/4-20x5/8	1
64	PM1800-464	Plate		1
65	TS-0254021	Socket Head Button Screw	1/4-20x1/2	2
66	PM1800-466	Lower Blade Guard		1
67	PM1800-467	C-Ring	S17	1
68	2013-270	Bevel Gear		2
69	2013-275	Bushing		3
70	PM1800-470	Shaft		1
71	PM1800-471	Carriage Bolt		1
72	PM1800-472	Front Trunnion		1
73	TS-0270061	Socket Set Screw	5/16-18x5/8	4
74	2013-259	Rear Trunnion		1
75	PM1800-475	Angle Scale Plate		1
76	TS-0246031	Flat Head Screw	5/16-18x3/4	6
77	TS-0680061	Flat Washer	1/2	1
78	6295158	Lock Handle		1
79	TS-081C022	Hex Cap Screw	#10-24x3/8	1
80	TS-0680011	Flat Washer	#10	1
81	6295155	Pointer		1
82	2013-203	Table Bracket		1
83	TS-0680041	Flat Washer	3/8	4
84	TS-0720091	Lock Washer	3/8	8
85	TS-0060051	Hex Head Bolt	3/8-16x1	8
86	3520B-126	Handle		1
87	TS-0270051	Socket Set Screw	5/16-18x1/2	2
88	PM1800-488	Handwheel		1
89	PM1800-489	C-Ring	S12	2
90	PM1800-490	Gear Bracket		1
91	TS-0267021	Socket Set Screw	1/4-20x1/4	6
92	2013-265	Bearing Cover		1
93	BB-6002ZZ	Ball Bearing	6002ZZ	1
94	TS-0208071	Socket Head Cap Screw	5/16-18x1-1/4	4
95	2013-267	C-Ring	S15	1
96	2013-284	Key	3x3x8	2
97	PM1800-497	Worm Shaft		1
98	PM1800-498	Scale		1
99	TS-0810012	Slotted Round Head Machine Screw	#10-24x1/4	2
100	PM1800-FA	Fence Assembly (index # 1 thru 26, 28, and 80)		1
101	PM1800-MGA	Miter Gauge Assembly (index # 32, 49, and 51 thru 62)		1

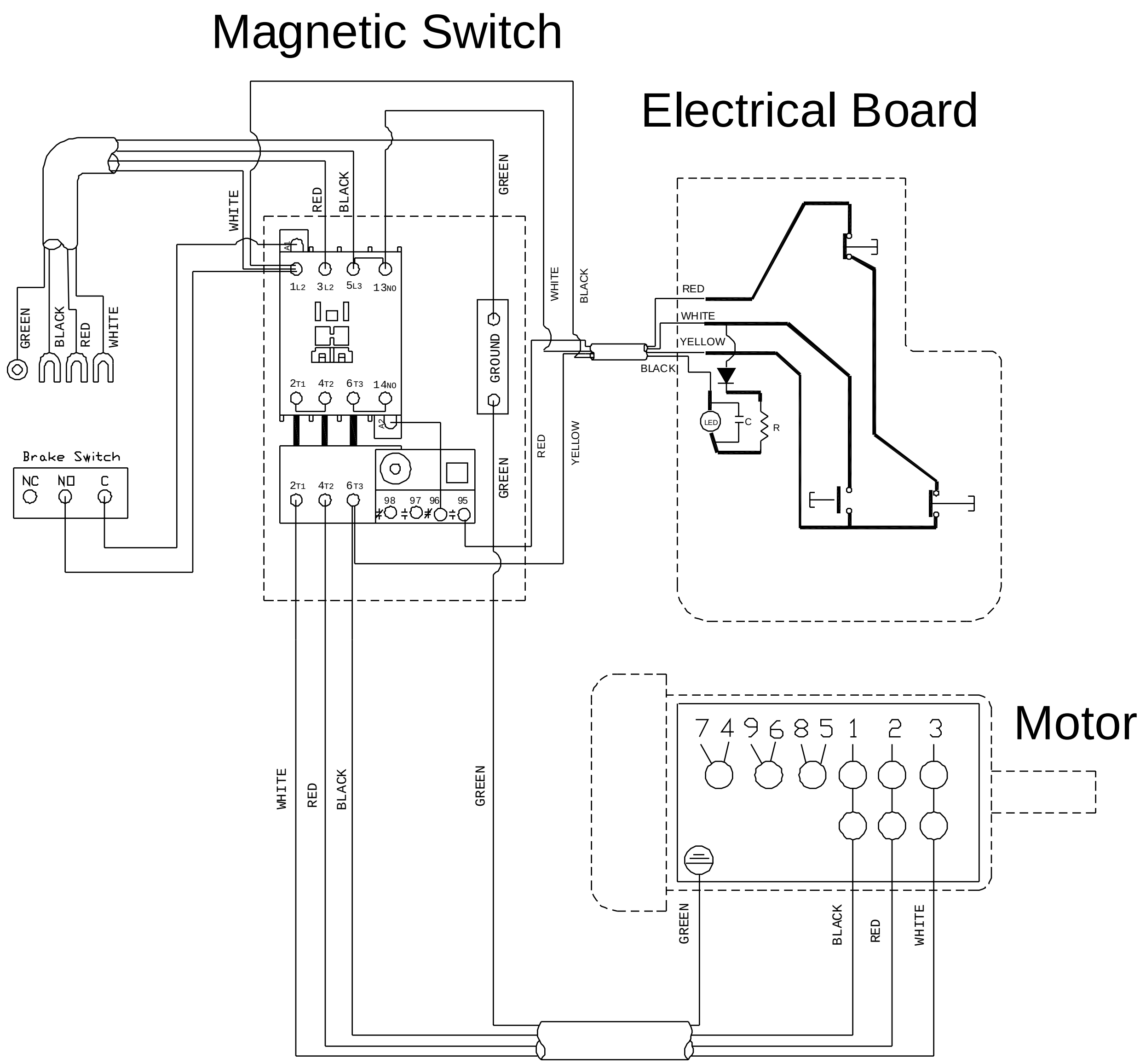
Electrical Connections – 5HP 1PH 230V



Electrical Connections – 5HP 3PH 230V



Electrical Connections – 5HP 3PH 460V



NOTES

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